SONY®

VTR PLAYBACK ADAPTOR

VA-500P

SONY
BATT CHECK
VU
LIGHT
OFF
ON
POWER
HEADPHONES
DOLBY NR
AUDIO PB LEVEL
CH-1
LNG
CH-2
CH-3
AFM
CH-4
VTR PLAYBACK ADAPTOR VA-500

BETACAM™

MAINTENANCE MANUAL
2nd Edition
Serial No. 12721 and Higher

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SECTION 1
TECHNICAL INFORMATION

1-1. SPECIFICATIONS

General

Power requirement
: DC 12V $^{+5.0}_{-1.5}$ V
Power consumption
: 15W
Operating temparature
: 0°C to 40°C
Operating humidity
: Less than 85% (relative humidity)
Storage temparature
: -20°C to +60°C
Weight : 2 kg
Dimensions : 212 x 88 x 222 mm (w/h/d)
Approx. not including projection parts

Video (Specifications on video is based on "playback with standard playback machine".)

Color system : PAL
VIDEO OUT 1/2 (BNC x 2)
: 1.0 Vp-p, 75 ohms, unbalanced
sync negative
ADV SYNC IN (BNC)
: 2.0 Vp-p, 75 ohms, unbalanced
sync negative
SC IN (BNC) : 1.0 Vp-p, 75 ohms, unbalanced
UHF OUT (Aerial)
: For TV system I (adjustable to
TV system G)

With a metal particle tape
Bandwidth
Luminance : 25 Hz - 5.0 MHz $^{+0.5}_{-6.0}$ dB
Chrominance : 25 Hz - 1.5 MHz $^{+0.5}_{-6.0}$ dB
S/N (Signal-to-noise ratio)
Luminance : More than 47 dB
(HPF : 10 kHz, LPF : 5.0 MHz, SC TRAP : ON)
Chrominance
AM : More than 48 dB
PM : More than 48 dB
(HPF : 100 Hz, LPF : 1 MHz)
DG : Less than 2%
DP : Less than 2°
Y/C delay : Less than 20 nsec
L.F linearity : Less than 3%
K factor (2T pulse)
: Less than 2%
Output signal (Composite Video)
: 1.0 ± 0.1 Vp-p

With an oxide tape
Bandwidth
Luminance : 25 Hz - 4.1 MHz $^{+0.5}_{-6.0}$ dB
Chrominance : 25 Hz - 1.5 MHz $^{+0.5}_{-6.0}$ dB
S/N (Signal-to-noise ratio)
Luminance : More than 45 dB
(HPF : 10 kHz, LPF : 5 MHz, SC TRAP : ON)
Chrominance
AM : More than 48 dB
PM : More than 48 dB
(HPF : 100 Hz, LPF : 500 kHz)
DG : Less than 3%
DP : Less than 3°
Y/C delay : Less than 20 nsec
L.F linearity : Less than 5%
K factor (2T pulse)
: Less than 3%
Output signal (Composite Video)
: 1.0 ± 0.1 Vp-p

Audio (Specifications on audio is based on "playback with standard playback machine".)

AUDIO OUT (XLR, 3-pin)
: +4 dBm, balanced(600 ohms load),
low impedance
HEADPHONES (Phone jack)
: 8 ohms, -26 dBs variable
(-20 dBs to -50 dBs)
FROM VTR (Audio input, 20-pin)
Input Level : -10 dBs
Input impedance
: More than 10 k ohms
Audio channel 1 or 2 (LNG)
With a metal particle tape
Frequency response (20 dB below peak level)*1
: 50 Hz - 15 kHz $^{+1.5}_{-3.0}$ dB
S/N*2 : More than 62 dB (3% distortion)

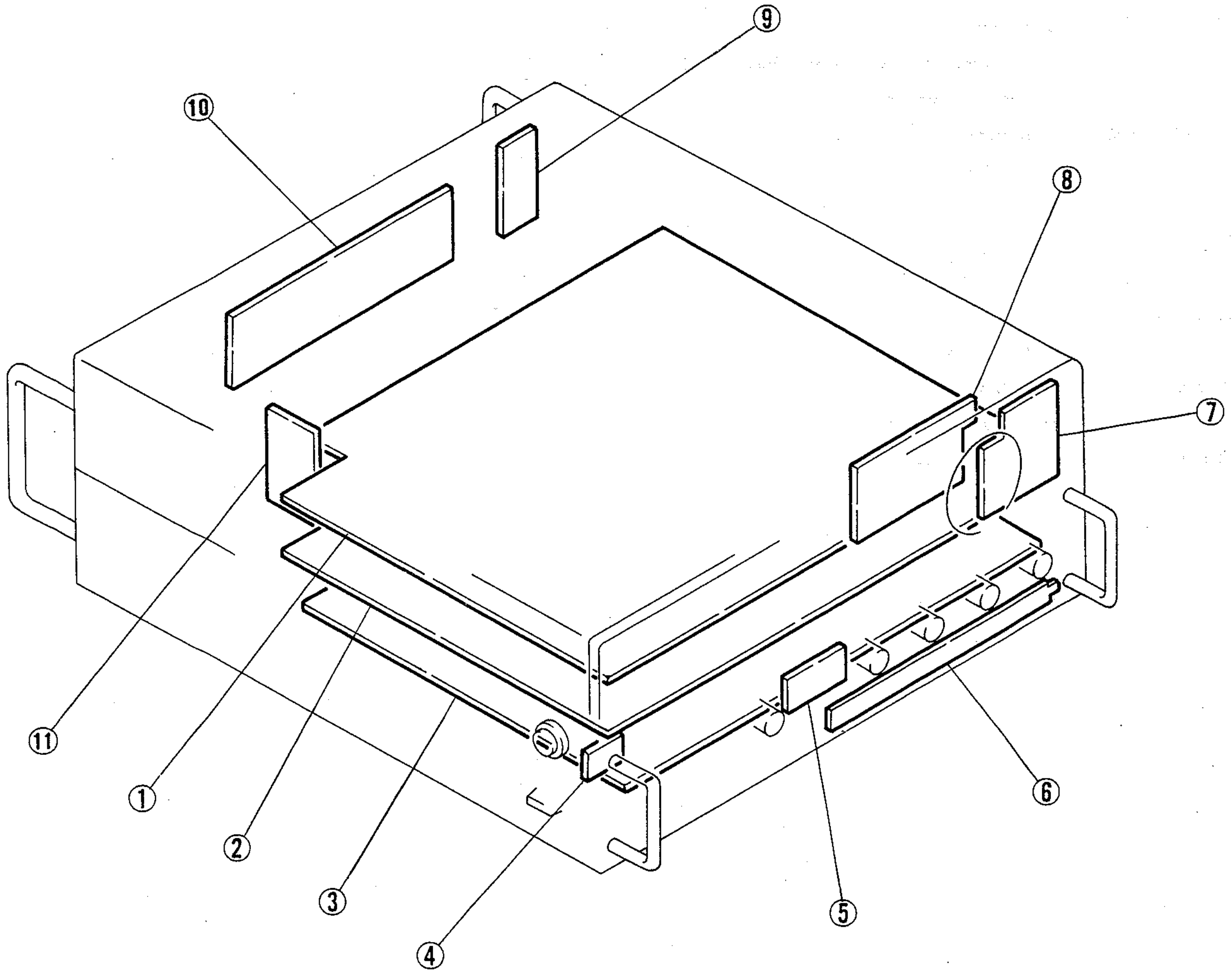
Distortion (1 kHz reference level)
at peak level*1 : Less than 3%
at 0VU level : Less than 1.5%
Cross talk : Less than -55 dB (1 kHz reference level)

With an oxide tape (DOLBY NR OFF)
Frequency response (20 dB below peak level)*1
: 50 Hz - 15 kHz ±3.0 dB
S/N*2 : More than 58 dB (3% distortion)
Distortion (1 kHz reference level)
at peak level*1 : Less than 3%
at 0VU level : Less than 2%
Cross talk : Less than -55 dB (1 kHz reference level)

Audio channel 3 or 4 (AFM)
Frequency response (20 dB below peak level)*1
: 20 Hz - 20 kHz $^{+0.5}_{-2.0}$ dB
S/N*2 : More than 68 dB (3% distortion)
Distortion (1 kHz reference level)
at peak level*1 : Less than 3%
at 0VU level : Less than 0.5%
Cross talk : Less than -65 dB (1 kHz reference level)

*1) Peak level....AFM: +19VU, LNG: +8VU
*2) referred to peak level, weighted CCIR468-3, with Audio N.R.

1-2. LOCATION OF THE PRINTED CIRCUIT BOARDS



① PR-103P Board
② PR-104P Board
③ AU-99P Board
④ SW-243 Board
⑤ SW-244 Board
⑥ SW-234 Board
⑦ SW-235 Board
⑧ MT-42 Board
⑨ SW-255 Board
⑩ CN-214 Board
⑪ CN-228 Board

1-3. PRINTED CIRCUIT BOARDS

The circuit information is provided below.

System	Board	Circuit function
VIDEO	PR-103P	Video RF Demodulator
	DL-19	CCD 1H Delay Line
	DM-64	Limiter
	DUS-194	Switch
	EQ-21	Phase Equalizer
	EQ-21A	Phase Equalizer
	FL-67	Frequency Compensator
	FM-13	Field Memory
	PA-72	RF Amp
	PA-72A	RF Amp
	TG-37	Timing Generator
	VA-69	Video Amp and Switcher
	PR-104P	CTDM Expander and Chroma Encode, Y/C Mix
	DL-18	Chroma 1/2H Delay Line
	DL-18A	Chroma 1H Delay Line
	NR-27/A	Noise Reduction
AUDIO	AU-99P	Audio System
OTHERS	CN-214	BNC Relay Board
	CN-228	RF Modulator Connection Board
	MT-42	Audio Mix Meter
	SW-234	Audio Monitor Select Switch
	SW-235	Audio Mix Switch
	SW-243	Power Switch Control
	SW-244	DOLBY ON/OFF Switch
	SW-255	75 ohm Terminate Switch
	DC-DC CONV.	DC-DC Converter

1-4. CONNECTION CONNECTOR

When external cables are connected to the connectors on the connector panel during maintenance, the hardware listed below (or equivalents) must be used.

Panel indication	Connection connector
FROM VTR	1-566-771-11 PLUG, 20P, MALE
SC IN	1-560-069-11 PLUG, BNC, MALE
ADV SYNC IN	1-560-069-11 PLUG, BNC, MALE
VIDEO OUT 1/2	1-560-069-11 PLUG, BNC, MALE
UHF OUT	1-508-459-00 PLUG, Aerial, FEMALE
DC IN 12V	1-508-362-00 PLUG, XLR, 4P, FEMALE
AUDIO OUT	1-508-083-00 CONNECTOR, XLR, 3P FEMALE

1-5. INPUT/OUTPUT SIGNAL OF THE CONNECTOR

The input and output signals of the main connectors on the Front and Connector Panels are as follows:

INPUT

ADV SYNC IN : 2.0 Vp-p, 75 ohms, unbalanced sync negative

SC IN : 1.0 Vp-p, 75 ohms, unbalanced

FROM VTR (Audio input)

Input Level : -10 dBs

Input Impedance : More than 10 k ohms

OUTPUT

Color system : PAL

VIDEO OUT 1/2 : 1.0 Vp-p, 75 ohms, unbalanced sync negative

UHF OUT : For TV system I (adjustable to TV system G)

HEADPHONES : 8 ohms, -26 dBs, variable (-20 dBs to -50 dBs)

1-6. SELECT SWITCH SETTING

Along with the select switches on the Front and Connector Panels, the switches listed below are in the unit under the Top Case.
These switches must be set according to operating condition.

1. Channel Select Switch of the RF Modulator
   Set the channel select switch of RF Modulator to an inactive channel, G or I.
   When this unit is shipped, this switch is set to I.

1-7. SUPPLIED ACCESSORY

Supplied VA-500P accessories are as follows:

1. 20-pin multi-cable
   The 20-pin multi-cable is used for connecting with BVV-5PS (Video Cassette Recorder).
   Both ends of the connector are same, and the 20-pin multi-cable can be used with connecting each side.

2. Shoulder belt
   When the VA-500P is carried, the shoulder belt is used.

SECTION 2
SERVICE INFORMATION

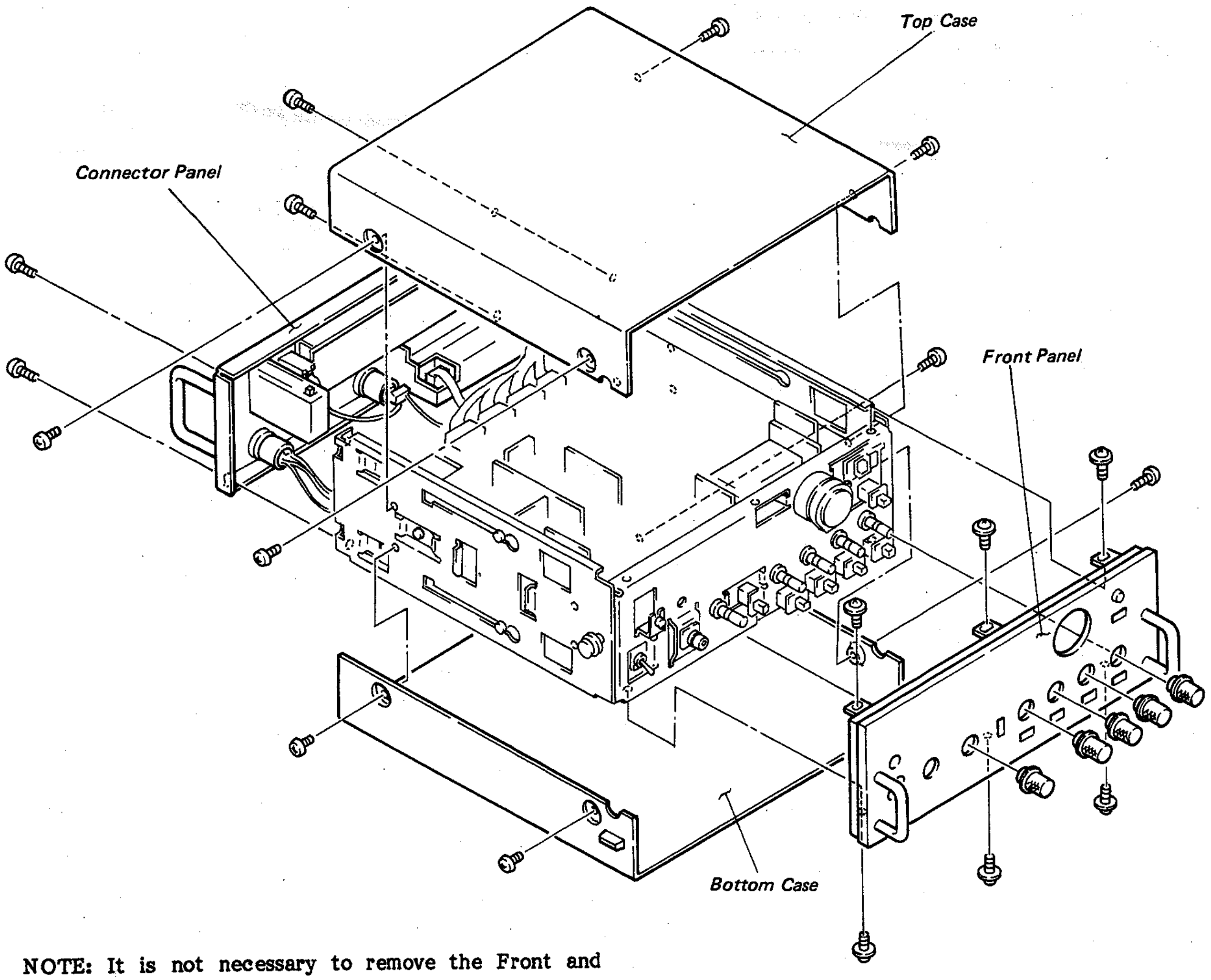
2-1. REMOVAL OF THE CABINETS

. Top Case : Remove the four fixing screws and then remove the Top Case.

. Bottom Case : Remove the four fixing screws and then remove the Bottom Case.

. Front Panel : After removing the Top and Bottom Cases, remove the five control knobs and the six fixing screws and then remove the Front Panel.

. Connector Panel : Remove the four fixing screws and then remove the Connector Panel.



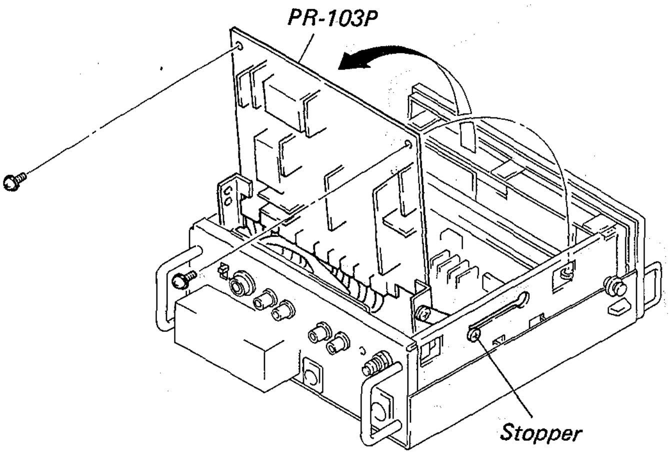
NOTE: It is not necessary to remove the Front and Connector Panels for the maintenance of the PR-103P, PR-104P and AU-99P Boards.

2-2. SERVICE OF THE MAIN PRINTED CIRCUIT BOARD

When repairing or checking this unit, it is necessary to connect the video cassette recorder BVV-5PS. In addition, connect each connectors as the need.

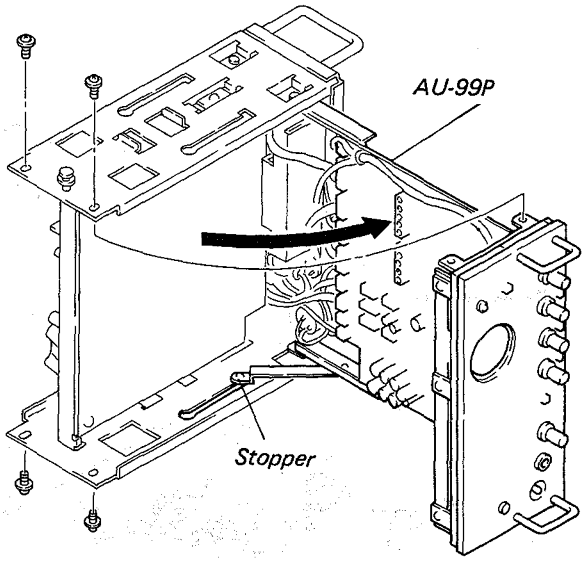
(1) Service of the PR-103P Printed Circuit Board

- Remove the Top Case.
- Remove the two fixing screws shown in the figure, then open the PR-103P board in the direction of the arrow.



(2) Service of the AU-99P Printed Circuit Board

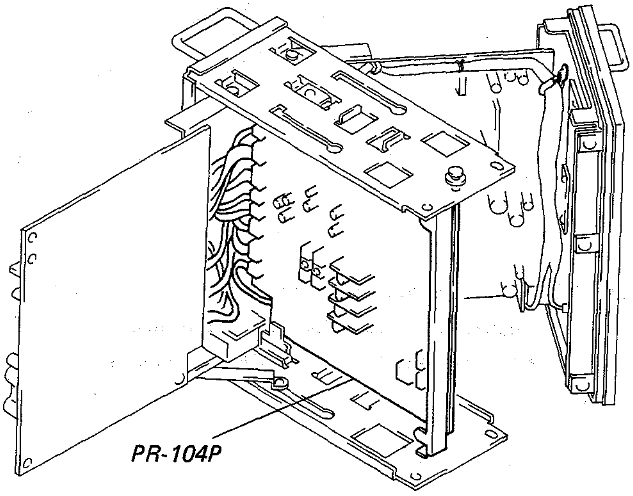
- Remove the Top and Bottom Cases.
- Remove the four fixing screws on the left and right sides (two screws on each side) and set the unit on its left side.
- Open the AU-99P board in the direction of the arrow.



NOTE: When opening the PR-103P and AU-99P boards, these boards are locked with the stoppers shown in the figure. When closing, release these locks.

(3) Service of the PR-104P Printed Circuit Board

- Open the PR-103P and AU-99P boards.



When checking or repairing the component side of the PR-104P board, open only the PR-103P board.

2-3. SPARE PARTS

1. The shaded and ⚠ -marked components are critical to safety.
   Replace only with the same components as specified.

2. Replacement parts supplied from the Sony Parts Center will sometimes have a shape different from the original parts. These differences are for improved parts and/or engineering changes or standardization of genuine parts.
   - This manual's exploded views and electrical spare parts list indicate the part numbers of the standardized genuine parts at the present time. Parts list indicate the part numbers of the standardized genuine parts at the present time.
   - Regarding engineering part changes in our engineering department, refer to Sony service bulletins and service manual supplements.
3. The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

SECTION 3
VIDEO SYSTEM ALIGNMENT

[Equipment Required]

- BVV-5PS (Should be adjusted correctly)
- AC-500CE
- Frequency counter
- Dual-trace oscilloscope
- PAL signal generator (TEKTRONIX 1411 or equivalent)
- Vector scope (TEKTRONIX 521A or equivalent)
- Alignment tapes CR5-2APS and CR5-1BPS
- Waveform Monitor (TEKTRONIX 1485R or equivalent)
- Monitor TV

[Alignment Tape]

CR5-2APS Contents

TIME min, sec	VIDEO TRACK
0 : 00	75 % Color Bars
3 : 00	Multi Burst
6 : 00	Bowtie & 10T Signal
9 : 00	Y 2T Pulse & Bar C No Signal
11 : 00	Quad Phase
13 : 00	Composite Monoscope (Switching position is shifted)
15 : 00	

CR5-1BPS Contents

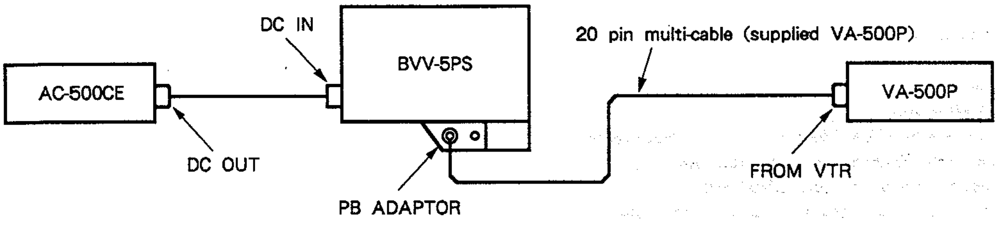
TIME min, sec	VIDEO TRACK	AFM
0 : 00	RF Sweep	NO SIGNAL
2 : 00	60 % H Sweep (CTDM)	
5 : 00	Pulse & Bar (CTDM)	
8 : 00	MULTI BURST	
11 : 00	Pulse & Bar	
14 : 00	100 % Color Bars	400 Hz SINE WAVE 25 k DEVIATION
16 : 30		75 k DEVIATION
17 : 00	Bowtie & 10T Signal	NO SIGNAL
19 : 00	Line 17A Signal	
22 : 00	QUAD PHASE	
24 : 00	Flat Field	
26 : 00	Color Bar with Dropout	
28 : 00	H SWEEP with VISC	
30 : 00		

＊1. When playing back this tape, check and adjust the audio reference level of the machine so that its audio output level is the nominal level (0VU) plus the calibration level as follows:

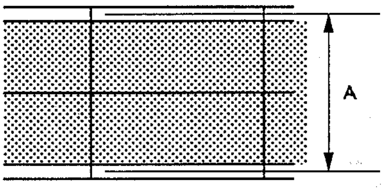
ex. calibration level = − 0.5 dB
actual output level = + 0VU − 0.5 dB = − 0.5 dB

＊2. Audio signals are recorded every 30 sec. When playing back this tape, check and adjust the audio frequency response of the machine so that its audio level is the reference level at 1 kHz plus the calibration level.

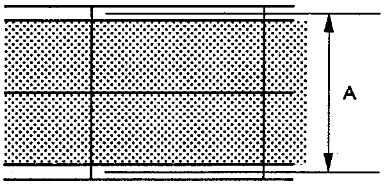
[Connection]


DC IN
BVV-5PS
20 pin multi-cable (supplied VA-500P)
AC-500CE
VA-500P
DC OUT
FROM VTR
PB ADAPTOR

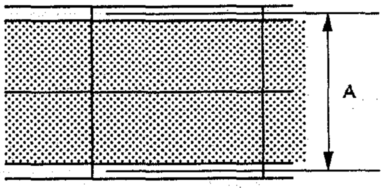
3-1. Y-RF LEVEL ADJUSTMENT (OXIDE)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP100/PR-103P (A-4)  A = 0.5 ± 0.02 Vp-p TRIG : TP108/PR-103P (B-3)	⊘RV601/PA-72A (A-4/PR-103P)

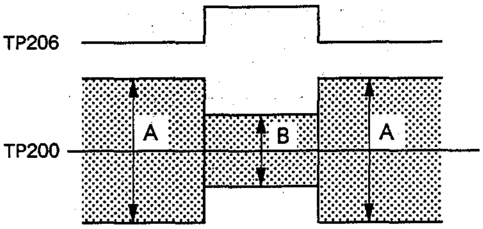
3-2. Y-RF LEVEL ADJUSTMENT (METAL)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a FLAT FIELD signal.	TP100/PR-103P (A-4)  A = 0.5 ± 0.02 Vp-p TRIG : TP108/PR-103P (B-3)	⊘RV602/PA-72A (A-4/PR-103P)

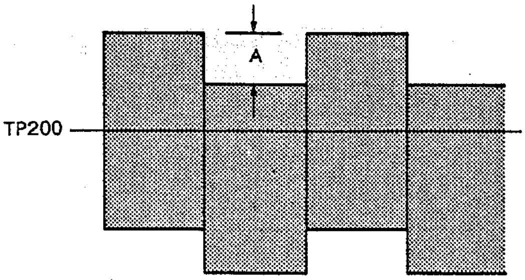
3-3. Y-AGC LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a FLAT FIELD signal.	TP100/PR-103P (A-5)  A = 0.5 ± 0.02 Vp-p TRIG : TP108/PR-103P (B-3)	⊘RV601/PR-103P (B-5)

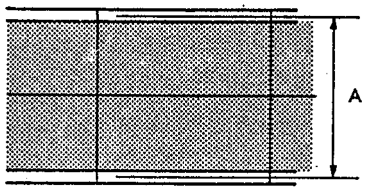
3-4. C-RF BALANCE/LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP200/PR-103P (D-3) TP206/PR-103P (C-3) CHOP mode  A = B = 0.5 ± 0.02 Vp-p TRIG : TP206/PR-103P (C-3)	⊘RV601/PA-72 (D-2) (B level) ⊘RV602/PA-72 (D-2) (A level)

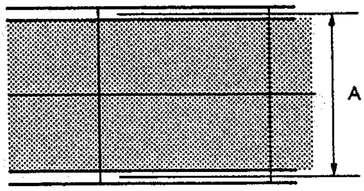
3-5. C-RF OFFSET ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP200/PR-103P (D-3) TP206/PR-103P (C-3)] CHOP mode  A = 0 TRIG : TP206/PR-103P (C-3)	●RV200/PR-103P (D-2)

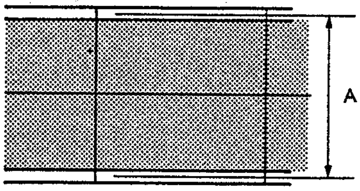
3-6. C-AGC LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP201/PR-103P (F-3)  A = 0.5 ± 0.02 Vp-p TRIG : TP206/PR-103P (C-3)	●RV204/PR-103P (F-2)

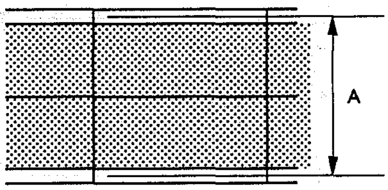
3-7. Y-COS EQ LEVEL ADJUSTMENT (METAL)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a FLAT FIELD signal.	TP102/PR-103P (D-7)  A = 0.12 ± 0.01 Vp-p TRIG : TP108/PR-103P (C-3)	⊘RV607/EQ-21 (A-6/PR-103P)

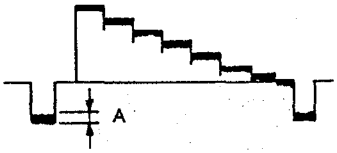
3-8. Y-COS EQ LEVEL ADJUSTMENT (OXIDE)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1APS alignment tape to the BVV-5PS, and play back a FLAT FIELD signal.	TP102/PR-103P (D-7)  A = 0.18 ± 0.01 Vp-p TRIG : TP108/PR-103P (B-3)	⊘RV1/FL-67 (C-7/PR-103P)

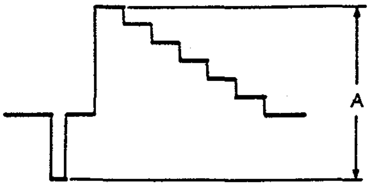
3-9. C-COS EQ LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a FLAT FIELD signal.	TP202/PR-103P (E-4)  A = 0.3 ± 0.01 Vp-p TRIG : TP206/PR-103P (C-3)	⊘RV607/EQ-21A (E-3/PR-103P)

3-10. Y-CARRIER BALANCE ADJUSTMENT

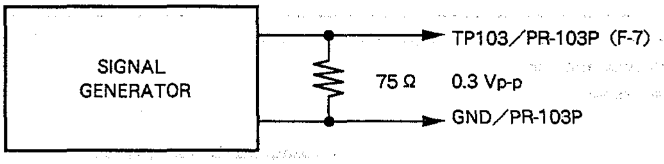
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP105/PR-103P (I-7)  Minimize a carrier-leak at the SYNC tip. (A ≦ 60 mVp-p) TRIG : TP108/PR-103P (B-3)	⊘RV608/DM-64 (E-7/PR-103P) ⊘RV102/PR-103P (C-7) Adjust alternately

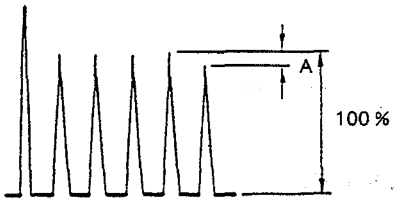
3-11. Y-DEMODULATOR OUTPUT LEVEL ADJUSTMEMT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP309/PR-103P (I-7)  A = 1.0 ± 0.04 Vp-p	⊘RV609/VA-69 (H-6/PR-103P)

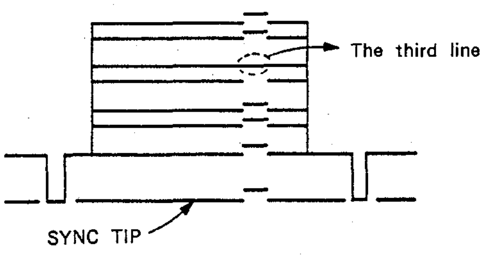
3-12. Y-DO CCD BIAS ADJUSTMENT

[Connection]

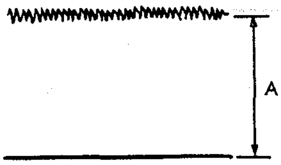


machine conditions for adjustment	spec.	adjustment
• Remove the solder bridge from SL100/PR-103P (F-7) • Supply 5-step signal to TP103 /PR-103P (F-7). • Waveform Monitor ; DIFF'D STEP mode. • Insert the blank tape to the BVV-5PS, and put into the PLAY mode. • After adjustment is completed, solder SL100 to the former position.	TP104/PR-103P (H-7)  A ≦ 4 % (Flat or amplitude is decreased to the right)	●RV610/DL-19 (I-6/PR-103P)

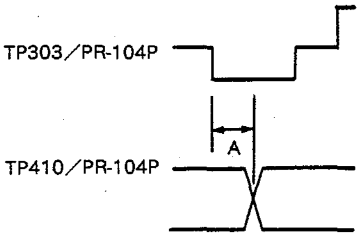
3-13. Y-DO COMPENSATE LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar (DO) signal.	TP309/PR-103P (I-1)  • Adjust the third line from the top of the drop out portion to the third line from the top (RV104). • Adjust the SYNC tip level of the drop out portion to the SYNC tip level (RV103).	●RV104/PR-103P (H-6) ●RV103/PR-103P (H-7) Adjust alternately

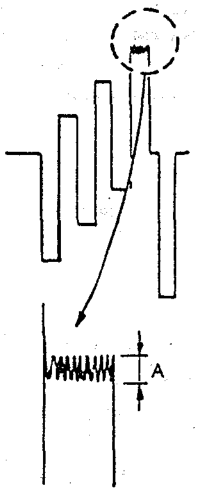
3-14. 910f_H OSC VCO ERROR ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP800/PR-103P (D-6)  A = 2.5 ± 0.1 Vdc	⊘LV800/PR-103P (C-6)

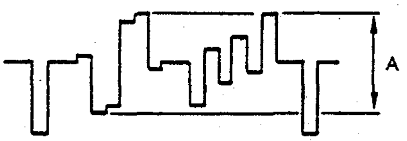
3-15. 910f_H OSC VCO DELAY ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP303/PR-104P (G-3) TP410/PR-104P (H-5)  A = 2.2 ± 0.2 μ sec	⊘RV800/PR-103P (D-6)

3-16. C-CARRIER BALANCE ADJUSTMENT

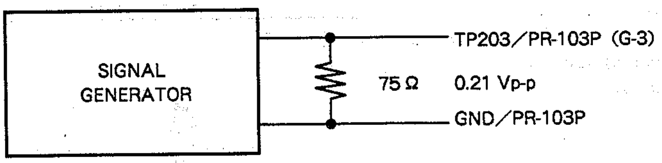
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP205/PR-103P (H-1)  A : Minimize (A ≦ 60 mVp-p)	●RV201/PR-103P (D-4) ●RV608/DM-64 (G-4/PR-103P) Adjust alternately

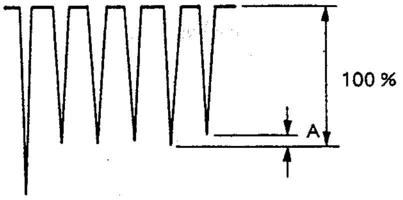
3-17. C-DEMODULATOR OUTPUT LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP205/PR-103P (H-1)  A = 0.933 ± 0.02 Vp-p	●RV609/VA-69 (H-2/PR-103P)

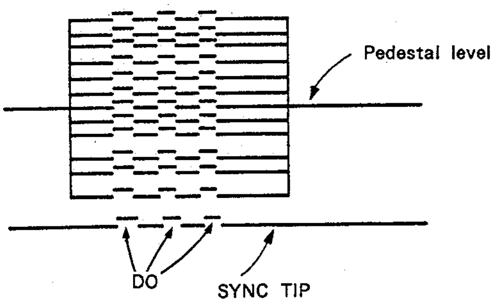
3-18. C-DO CCD BIAS ADJUSTMENT

[Connection]

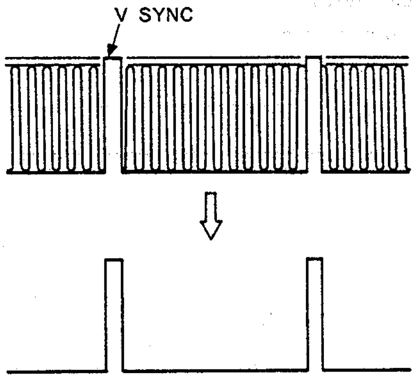


machine conditions for adjustment	spec.	adjustment
• Remove the solder bridge from SL200／PR-103P (G-3). • Supply 5-step signal to TP203／PR-103P (G-3). • Waveform monitor ; DIFF'D STEP mode. • Insert the blank tape to the BVV-5PS, and put into the PLAY mode. • After adjustment is completed, solder SL200 to the former position.	TP204／PR-103P (F-1)  A ≦ 4 % (Flat or amplitude is increased to the right)	⊘RV610／DL-19 (G-1／PR-103P)

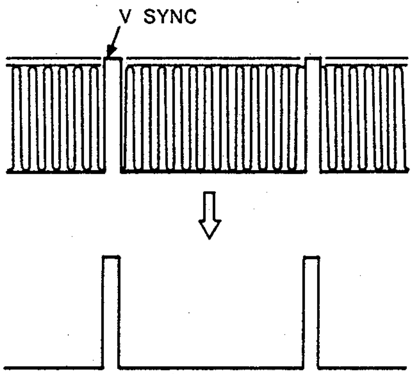
3-19. C-DO COMPENSATE LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar (DO) signal.	TP205／PR-103P (H-1)  • Adjust the seventh line from the top of the drop out portion to the pedestal level (RV203). • Adjust the SYNC tip level of the drop out portion to the SYNC tip level (RV202).	⊘RV203／PR-103P (F-2) ⊘RV202／PR-103P (G-2) Adjust alternately

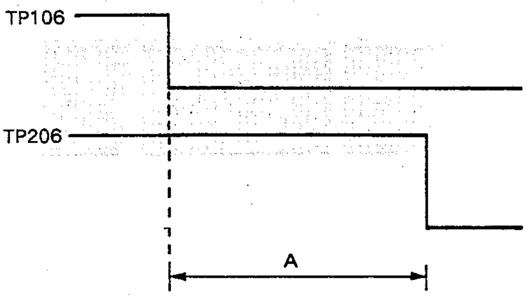
3-20. Y-DO SENSITIVITY ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Solder the 180 Ω resistor (1-215-403-00) in parallel with R164/PR-103P (A-6). • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back flat field. • After adjustment is completed, unsolder the 180 Ω resistor.	TP107/PR-103P (B-6)  	●RV108/PR-103P (B-7)

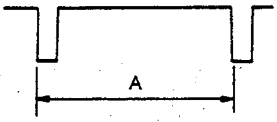
3-21. C-DO SENSITIVITY ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Solder the 180 Ω resistor (1-215-403-00) in parallel with R279/PR-103P (E-2). • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back flat field. • After adjustment is completed, unsolder the 180 Ω resistor.	TP207/PR-103P (F-2)  	●RV206/PR-103P (F-2)

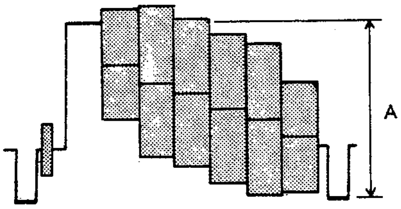
3-22. C SWITCHING PULSE DELAY ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
- Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP106/PR-103P (B-4) TP206/PR-103P (C-3)  A = 156 ± 10 μ sec TRIG : TP106/PR-103P (B-2)	●RV105/TG-37 (B-2/PR-103P)

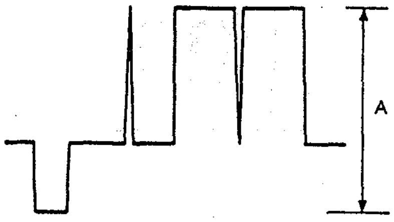
3-23. PSEUDO H SYNC FREQUENCY ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
- Put the BVV-5PS into STOP mode.	TP605/PR-103P (D-5)  A = 68 ± 1 μ sec	●RV601/PR-103P (E-5)

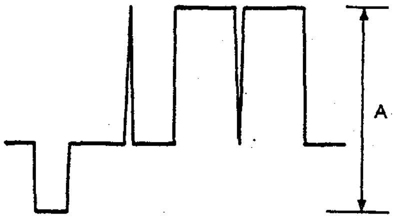
3-24. VIDEO OUT LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
- MODE : STOP - Connect the PAL signal generator (TEKTRONIX 1411 or equivalent) to the ENCODE VIDEO OUT connector/BVV-5PS, and supply a color-bar signal.	VIDEO OUT connector/VA-500P  A = 1 ± 0.05 Vp-p	●RV411/PR-104P (D-2)

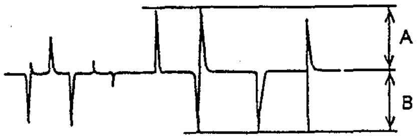
3-25. Y-NONLINEAR DE-EMPHASIS ADJUSTMENT (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP305/PR-104P (I-4)  A = 1.0 ± 0.05 Vp-p	⊘RV1/NR-27A (I-4/PR-104P)

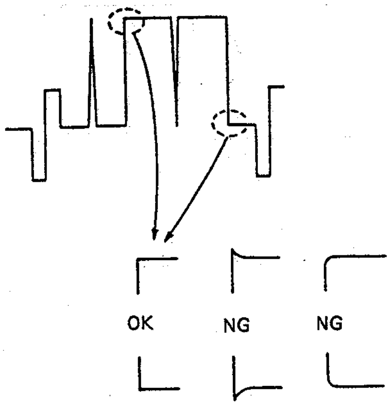
3-26. Y-LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP305/PR-104P (I-4)  A = 1.0 ± 0.05 Vp-p	⊘RV307/PR-104P (G-3)

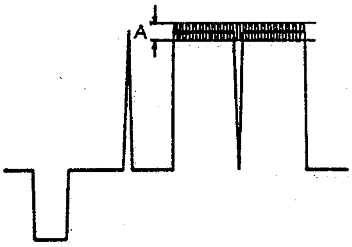
3-27. Y-NONLINEAR DE-EMPHASIS ADJUSTMENT (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a pulse & bar signal,	TP304/PR-104P (I-4)  A = B	⊘RV3/NR-27A (I-4/PR-104P)

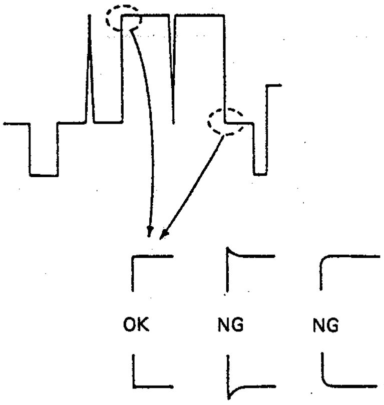
3-28. Y-NONLINEAR DE-EMPHASIS ADJUSTMENT (3)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP305/PR-104P (I-4)  	●RV2/NR-27A (I-4/PR-104P) ●RV4/NR-27A (I-4/PR-104P)

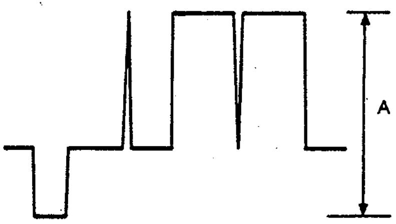
3-29. Y-NOISE CANCELLER ADJUSTMENT (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a pulse & bar signal. • Turn RV7/NR-27A (I-4/PR-104P) fully clockwise.	TP303/PR-104P (G-4)  A : Minimize	●RV6/NR-27A (I-4/PR-104P) ●RV7/NR-27A (I-4/PR-104P)

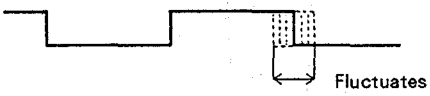
3-30. Y-NOISE CANCELLAR ADJUSTMENT (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP305/PR-104P (G-4)  	●RV7/NR-27A (I-4/PR-104P)

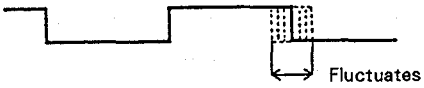
3-31. Y-NOISE CANCELLER OUTPUT ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP303/PR-104P (G-4) TP300/PR-104P (I-1)  A = 1.0 ± 0.05 Vp-p TRIG : INT	●RV5/NR-27A (I-4/PR-104P)

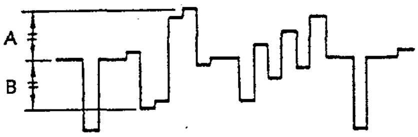
3-32. C-AFC 1/8 CLOCK ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP503/PR-104P (D-8)  Minimize the fluctuation of the signal. A = 0 ± 20 nsec	⊘RV501/PR-104P (C-6)

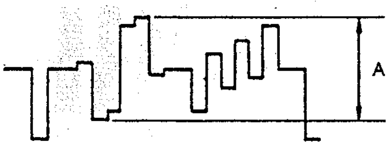
3-33. Y-AFC 1/8 CLOCK ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP502/PR-104P (D-8)  Minimize the fluctuation of the signal. A = 0 ± 20 nsec	⊘RV502/PR-104P (C-7)

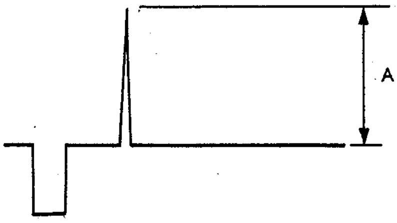
3-34. PRE-ϕ CCD BIAS ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP100/PR-104P (E-5)  $\frac{A}{B} = 100 \pm 2\%$	⊘RV1/DL-18A (D-3/PR-104P)

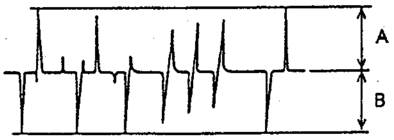
3-35. PRE-ϕ CCD OUTPUT ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP100/PR-104P (E-5)  A = 0.933 ± 0.02 Vp-p	●RV100/PR-104P (F-6)

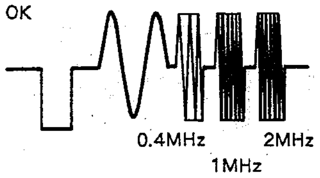
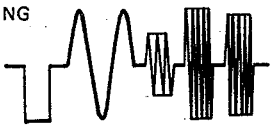
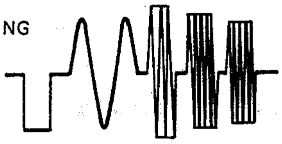
3-36. C-NONLINEAR DE-EMPHASIS ADJUSTMENT (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	TP103/PR-104P (E-3)  A = 0.7 ± 0.02 Vp-p	●RV1/NR-27 (E-3/PR-104P)

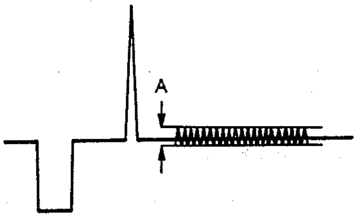
3-37. C-NONLINEAR DE-EMPHASIS ADJUSTMENT (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a color-bar signal,	TP101/PR-104P (F-3)  A = B	●RV3/NR-27 (E-3/PR-104P)

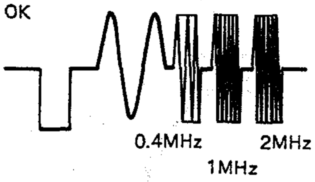
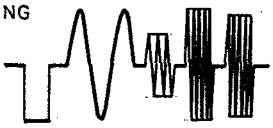
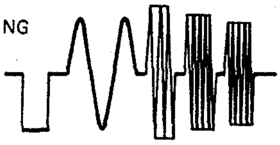
3-38. C-NONLINEAR DE-EMPHASIS ADJUSTMENT (3)

machine conditions for adjustment	spec.	adjustment
- Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a MULTI BURST signal.	TP103/PR-104P (E-3) OK  NG  NG 	●RV2/NR-27A (E-3/PR-104P) ●RV4/NR-27A (E-3/PR-104P) Adjust alternately

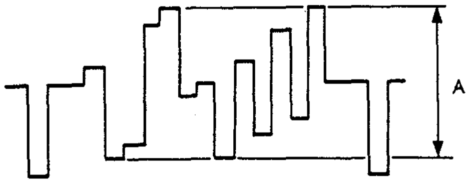
3-39. C-NOISE CANCELLER ADJUSTMENT (1)

machine conditions for adjustment	spec.	adjustment
- Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a 10T signal. - Turn RV7/NR-27A (E-7/PR-104P) fully clockwise.	TP102/PR-104P (F-5)  A : Minimize	●RV6/NR-27A (E-3/PR-104P) ●RV7/NR-27A (E-3/PR-104P)

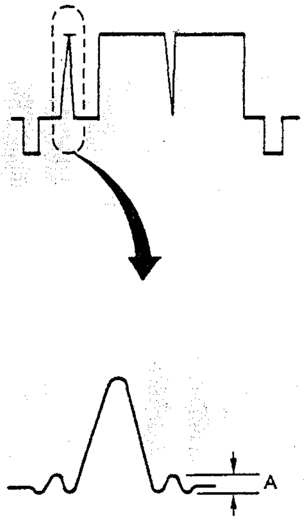
3-40. C-NOISE CANCELLAR ADJUSTMENT (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a MULTI BURST signal.	TP102/PR-104P (F-5) OK  NG  NG 	●RV7/NR-27A (E-4/PR-104P)

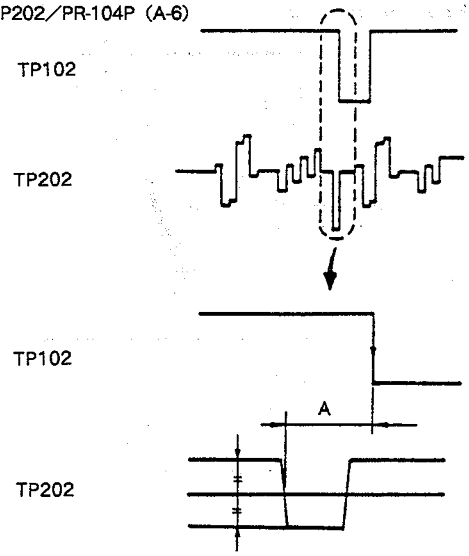
3-41. C-NOISE CANCELLER OUTPUT ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-2APS alignment tape to the BVV-5PS, and play back a 10T signal.	TP102/PR-104P (F-5)  A = 0.7 ± 0.02 Vp-p	●RV5/NR-27A (E-4/PR-104P)

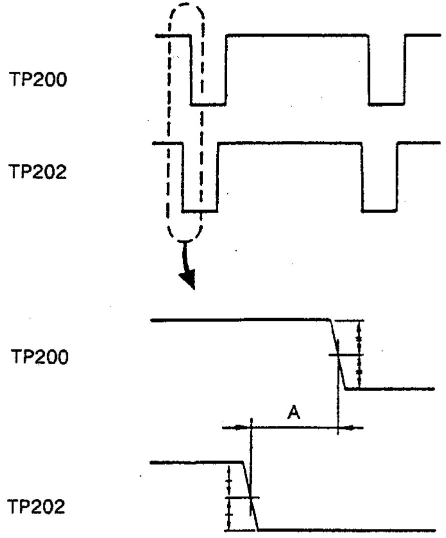
3-42. K FACTOR ADJUSTMEMT

machine conditions for adjustment	spec.	adjustment
• Using a short clip, short between TP414/PR-104P (F-6) and TP203/PR-104P (A-6). • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a pulse & bar signal. • After adjustment is completed, remove the short clip.	VIDEO OUT connector/VA-500P  A : Minimize	⊘RV2/FL-67 (C-6/PR-103P)

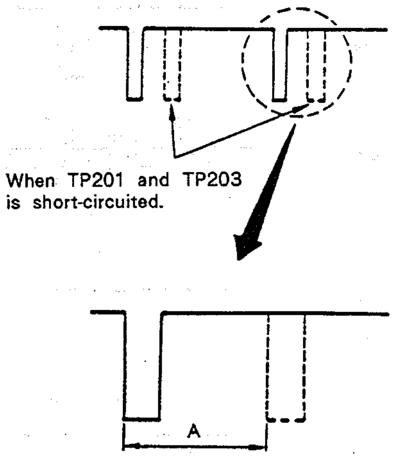
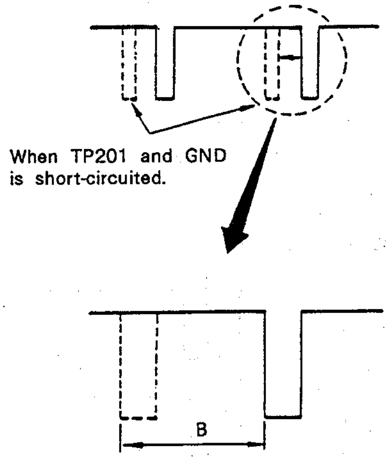
3-43. PRE-φ C-SH ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP102/PR-104P (F-5) TP202/PR-104P (A-6)  TP102 TP202 TP102 A TP202 A = 2.15 ± 0.04 μ sec	⊘RV108/PR-104P (C-4)

3-44. PRE-φ Y-SH ADJUSTMENT

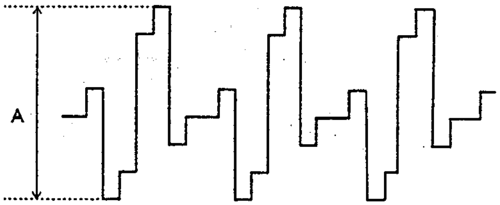
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP202/PR-104P (A-6) TP200/PR-104P (D-8)  TP200 TP202 TP200 A TP202 A = 0.85 ± 0.05 μ sec	⊘RV200/PR-104P (B-6)

3-45. PRE-φ LIMITER ADJUSTMENT

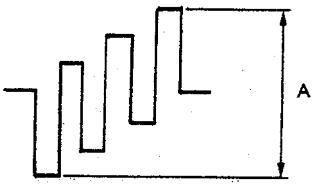
machine conditions for adjustment	spec.	adjustment
Step 1. • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal. • Using a short clip, short between TP201/PR-104P (A-6) and TP203/PR-104P (A-6). • After adjustment is completed, remove the short clip.	TP200/PR-104P (D-8) TP202/PR-104P (A-6)  When TP201 and TP203 is short-circuited. A A = 16 ± 1 μ sec TRIG : TP200/PR-104P (D-8)	⊘RV202/PR-104P (A-4)
Step 2. • Using a short clip, short between TP201/PR-104P (A-6) and GND/PR-103P. • After adjustment is completed, remove the short clip.	 When TP201 and GND is short-circuited. B B = 16 ± 1 μ sec TRIG : TP200/PR-104P (D-8)	⊘RV201/PR-104P (A-4)

3-46. R-Y LEVEL ADJUSTMENT

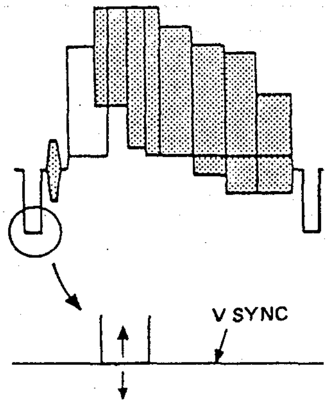
Before performing this adjustment, perform Section 3-60. EXP-CCD BIAS ADJUSTMENT (1) and Section 3-61. EXP-CCD BIAS ADJUSTMENT (2).

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP600/PR-104P (G-6)  When RV600 is adjusted, the waveform level changes one by one. A = 0.933 ± 0.02 Vp-p	⊘RV600/PR-104P (E-7) ⊘RV602/PR-104P (F-7) Adjust alternately

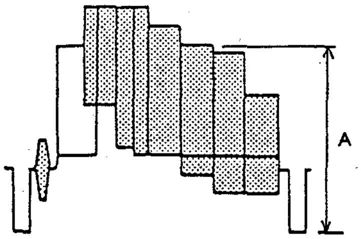
3-47. B-Y LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP601/PR-104P (G-7)  When RV601 is adjusted, the waveform level changes one by one. A = 0.933 ± 0.02 Vp-p	⊘RV601/PR-104P (E-8) ⊘RV605/PR-104P (G-8)

3-48. Y SYNC REPLACEMENT ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
- Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP412/PR-104P (D-1)  *Adjust the SYNC tip level of H-SYNC to the V-SYNC.*	⊘RV308/PR-104P (F-3)

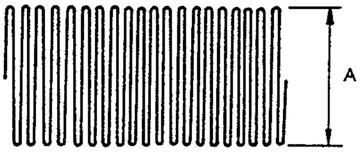
3-49. Y OUTPUT ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
- Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	VIDEO OUT connector/VA-500P (Terminated by 75 Ω)  A = 1.0 ± 0.02 Vp-p	⊘RV309/PR-104P (E-2)

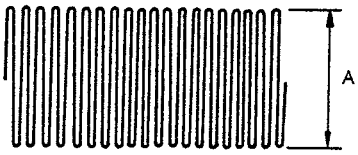
3-50. 4.43MHz OSC ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Connect the oscilloscope to TP406/PR-104P (I-7) and connect the frequency counter to the out connector. • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP406/PR-104P (I-7) f = 4,433,618 ± 5 Hz	⊘CV400/PR-104P (I-7)

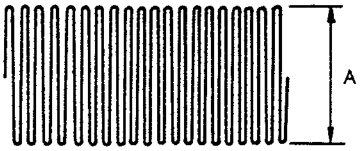
3-51. SC-TUNING ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP407/PR-104P (I-7)  A : Maximize	⊘LV400/PR-104P (H-7)

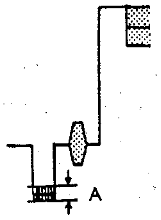
3-52. U-LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP408/PR-104P (H-4)  A = 0.6 ± 0.1 Vp-p	⊘RV407/PR-104P (H-7)

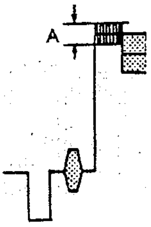
3-53. V-LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP409/PR-104P (H-4)  A = 0.6 ± 0.1 Vp-p	⊘RV409/PR-104P (I-7)

3-54. C-BLANKING ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP412/PR-104P (D-1)  A : Minimize (A ≦ 20 mV)	⊘RV402/PR-104P (F-4) ⊘RV404/PR-104P (F-4) Adjust alternately

3-55. C-CARRIER BALANCE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal,	TP412/PR-104P (D-1)  A : Minimize (A ≦ 40 mV)	⊘RV401/PR-104P (G-6) ⊘RV403/PR-104P (F-6) Adjust alternately

3-56. BURST BALANCE ADJUSTMENT

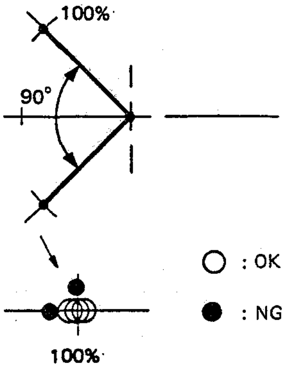
<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr><td>

- Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.

</td><td>

VIDEO OUT connector/VA-500P

Vectorscope



</td><td>

⊘RV405/PR-104P (G-5)

</td></tr>
</table>

3-57. C-BALANCE ADJUSTMENT

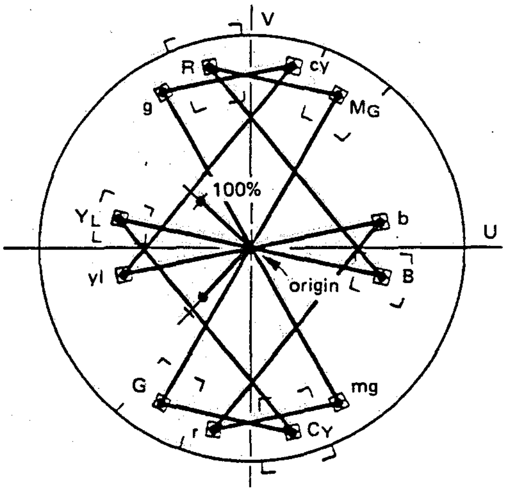
<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr><td>

- Supply a SC signal to the SC IN connector/VA-500P and the EXT SC IN connector/vectorscope.
- Adjust the level so that "R" and "CY" are nearly placed inside the "⊞" frame.

</td><td>

VIDEO OUT connector/VA-500P

Vectorscope



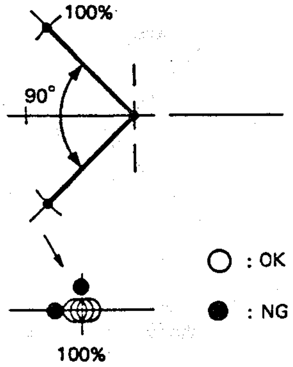
All locus should be placed inside the "⊞" frame.

</td><td>

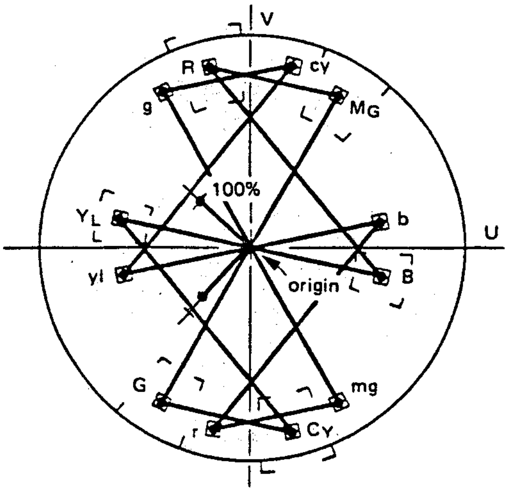
⊘RV400/PR-104P (G-6)
⊘RV408/PR-104P (I-6)
Adjust alternately

</td></tr>
</table>

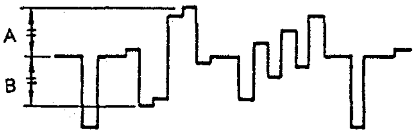
3-58. BURST LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal. • Set the GAIN on the vectorscope to CAL.	VIDEO OUT connector/VA-500P Vectorscope 	⊘RV406/PR-104P (F-1)

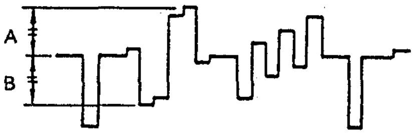
3-59. CHROMA LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	VIDEO OUT connector/VA-500P Vectorscope  All locus should be placed inside the "⊞" frame.	⊘RV410/PR-104P (G-4)

3-60. EXP-CCD BIAS ADJUSTMENT (1)

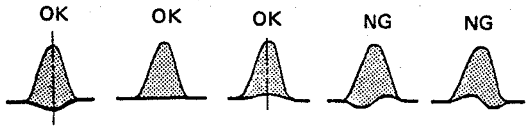
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP600/PR-104P (G-6)  $\frac{A}{B} = 100 \pm 2\%$	⊘RV1/DL-18 (E-7/PR-104P) ⊘RV1/DL-18 (E-7/PR-104P)

3-61. EXP-CCD BIAS ADJUSTMENT (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP601/PR-104P (G-7)  $\frac{A}{B} = 100 \pm 2\%$	⊘RV1/DL-18 (E-8/PR-104P) ⊘RV1/DL-18 (E-6/PR-104P)

3-62. Y/C DELAY ADJUSTMENT

The play back function of this unit is guaranteed by the standard VTR. However it is possible to appear the Y/C delay by connecting the BVV-5PS. When the Y/C delay is appeared, adjust as follows.

machine conditions for adjustment	**spec.**	**adjustment**
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a pulse & bar signal.	VIDEO OUT 1 or 2 connector/VA-500P  0 ± 20 nsec	⊘RV600/PR-103P (E-5)

Note)
- Free Run Adjustment
  Set ⊘RV500/PR-104P (B-4) to the mechanical center position.
- At this time, the circuits contained the following potentiometers are not function.
  ⊘RV300, 308, 309, 310/PR-103P, RV602/TG-37

SECTION 4
AUDIO SYSTEM ALIGNMENT

[Equipment Required]

- BVV-5PS (Should be adjusted correctly)
- Frequency counter
- Audio Oscillator
- Oscilloscope
- External Power Supply (2A, 12V)
- AC Voltmeter
- Alignment Tapes CR5-1BPS and CR8-1BPS

CR5-1BPS Contents

TIME min, sec	VIDEO TRACK	AFM
0 : 00	RF Sweep	NO SIGNAL
2 : 00	60 % H Sweep (CTDM)	
5 : 00	Pulse & Bar (CTDM)	
8 : 00	MULTI BURST	
11 : 00	Pulse & Bar	
14 : 00	100 % Color Bars	400 Hz SINE WAVE 25 k DEVIATION
16 : 30		75 k DEVIATION
17 : 00	Bowtie & 10T Signal	NO SIGNAL
19 : 00	Line 17A Signal	
22 : 00	Quad PHASE	
24 : 00	Flat Field	
26 : 00	Color Bar with Dropout	
28 : 00	H SEEP with VISC	
30 : 00		

CR8-1BPS Contents

TIME min, sec	VIDEO TRACK	AUDIO TRACK
0 : 00	Black Burst	1 kHz 0VU
2 : 30		Blank (only Bias)
3 : 00		15 kHz 0VU
5 : 00		1 kHz −20VU
6 : 00		40 Hz −20VU 7 kHz −20VU 10 kHz −20VU 15 kHz −20VU
8 : 00	——	1 kHz 0VU
10 : 00		

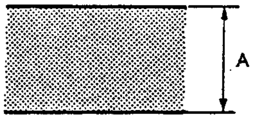
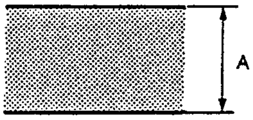
4-1. VCO OSCILLATING FREQUENCY ADJUSTMENT 540 kHz

machine conditions for adjustment	spec.	adjustment
• Using a short clip, short between TP409/AU-99P (H-5) and TP310/AU-99P (I-5). • After adjustment is completed, remove the short clip.	TP408/AU-99P (G-5) 540 ± 1 kHz	●RV403/AU-99P (G-4)

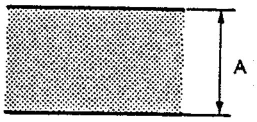
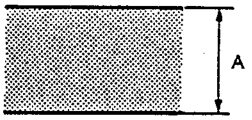
4-2. VCO OSCILLATING FREQUENCY ADJUSTMENT 310 kHz

machine conditions for adjustment	spec.	adjustment
• Using a short clip, short between TP309/AU-99P (I-5) and TP310/AU-99P (I-5). • After adjustment is completed, remove the short clip.	TP308/AU-99P (I-5) 310 ± 1 kHz	●RV303/AU-99P (H-4)

4-3. AFM RF AMP GAIN ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
Step 1. • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400Hz sine-wave 25kHz deviation.	TP302/AU-99P (I-3)  A = 0.3 ± 0.01 Vp-p	●RV308/AU-99P (H-1)
Step 2. • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400Hz sine-wave 25kHz deviation.	TP303/AU-99P (H-4)  A = 1.5 ± 0.1 Vp-p	●RV301/AU-99P (H-3)

4-4. DO MUTE COMPARATOR ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
Step 1. • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400Hz sine-wave 25kHz deviation.	TP303/AU-99P (H-4)  A = 0.3 ± 0.01 Vp-p	⊘RV301/AU-99P (H-3)
Step 2. • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400Hz sine-wave 25kHz deviation.	TP502/AU-99P (E-4) Adjust RV500 so that the level of TP502 changes from L level (less than 3.6V) to H level (more than 8.4V)	⊘RV500/AU-99P (D-4)
Step 3.	TP303/AU-99P (H-4)  A = 1.5 ± 0.1 Vp-p	⊘RV301/AU-99P (H-3)

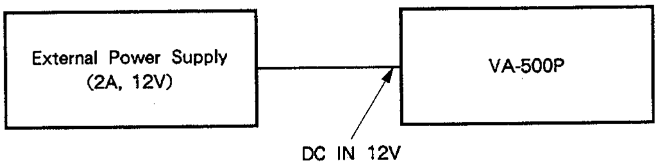
4-5. AFM LEVEL ADJUSTMENT 3CH

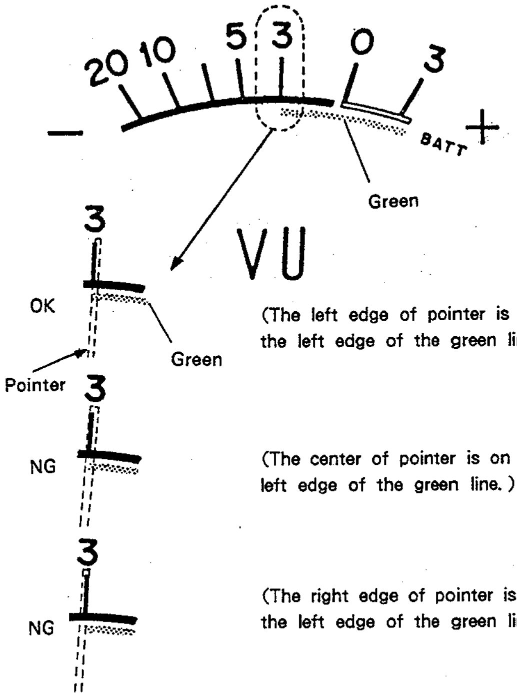
machine conditions for adjustment	spec.	adjustment
• AUDIO PB LEVEL switch CH-1, 2, 4 : OFF CH-3 : ON • AUDIO PB LEVEL volume CH-3 Vol. : MAX • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400 Hz sine-wave 25 kHz deviation signal.	AUDIO OUT connector/VA-500P (Terminated by 600 Ω) + 11 ± 1 dBm	⊘RV305/AU-99P (I-6)

4-6. AFM LEVEL ADJUSTMENT 4CH

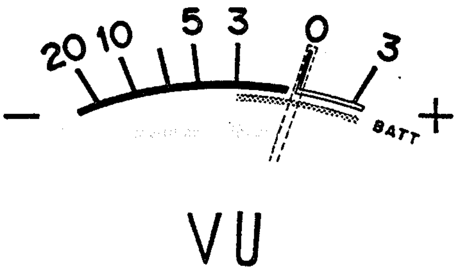
machine conditions for adjustment	spec.	adjustment
• AUDIO PB LEVEL switch CH-1, 2, 3 : OFF CH-4 : ON • AUDIO PB LEVEL volume CH-4 Vol. : MAX • Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400 Hz sine-wave 25 kHz deviation signal.	AUDIO OUT connector/VA-500P (Terminated by 600 Ω) +11 ± 1 dBm	⊘RV405/AU-99P (H-5)

4-7. METER DRIVE AMP (BATT) ADJUSTMENT

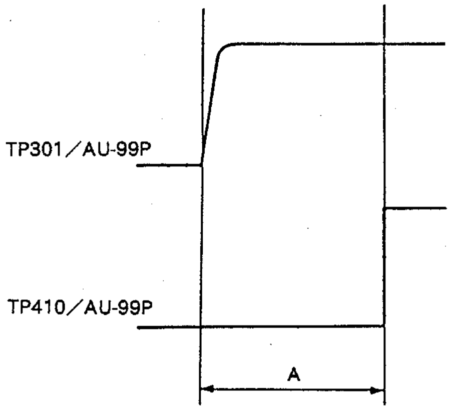

External Power Supply
(2A, 12V)
VA-500P
DC IN 12V

machine conditions for adjustment	spec.	adjustment
• Supply 10.5 ± 0.2 Vdc of an external power to the VA-500P. • Press the BATT CHECK button. (Note) Place the unit horizontal to the floor in checking or adjustment.	Level meter  20 10 5 3 0 3 − + BATT Green VU 3 OK Green Pointer 3 NG 3 NG (The left edge of pointer is on the left edge of the green line.) (The center of pointer is on the left edge of the green line.) (The right edge of pointer is on the left edge of the green line.)	⊘RV502/AU-99P (C-2)

4-8. METER DRIVE AMP (VU) ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400 Hz sine-wave 25 kHz deviation signal. • AUDIO PB LEVEL switch CH-1, 2, 3 : OFF CH-4 : ON • AUDIO PB LEVEL volume CH-4 : Around center (Note) Place the unit horizontal to the floor in checking or adjustment.	Level meter  The center of pointer should be 0VU.	●RV501/AU-99P (B-2)

4-9. HOLD PULSE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a color-bar signal.	TP301/AU-99P (E-2) TP410/AU-99P (H-5)  A = 5 ± 1 μ sec	●RV505/AU-99P (D-4)

4-10. HOLD ADJUSTMENT 4CH

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400 Hz sine-wave 25 kHz deviation signal. • Turn RV404/AU-99P (H-5) fully counterclockwise. • AUDIO PB LEVEL switch CH-1, 2, 3 : OFF CH-4 : ON • AUDIO PB LEVEL volume CH-4 : MAX	HEADPHONES/VA-500P NOISE : Minimize	⊘RV404/AU-99P (H-5)

4-11. HOLD ADJUSTMENT 3CH

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1BPS alignment tape to the BVV-5PS, and play back a 400 Hz sine-wave 25 kHz deviation signal. • Turn RV304/AU-99P (I-5) fully counterclockwise. • AUDIO PB LEVEL switch CH-1, 2, 4 : OFF CH-3 : ON • AUDIO PB LEVEL volume CH-3 : MAX	HEADPHONES/VA-500P NOISE : Minimize	⊘RV304/AU-99P (I-5)

4-12. LNG FREQUENCY RESPONSE CHECK 1CH

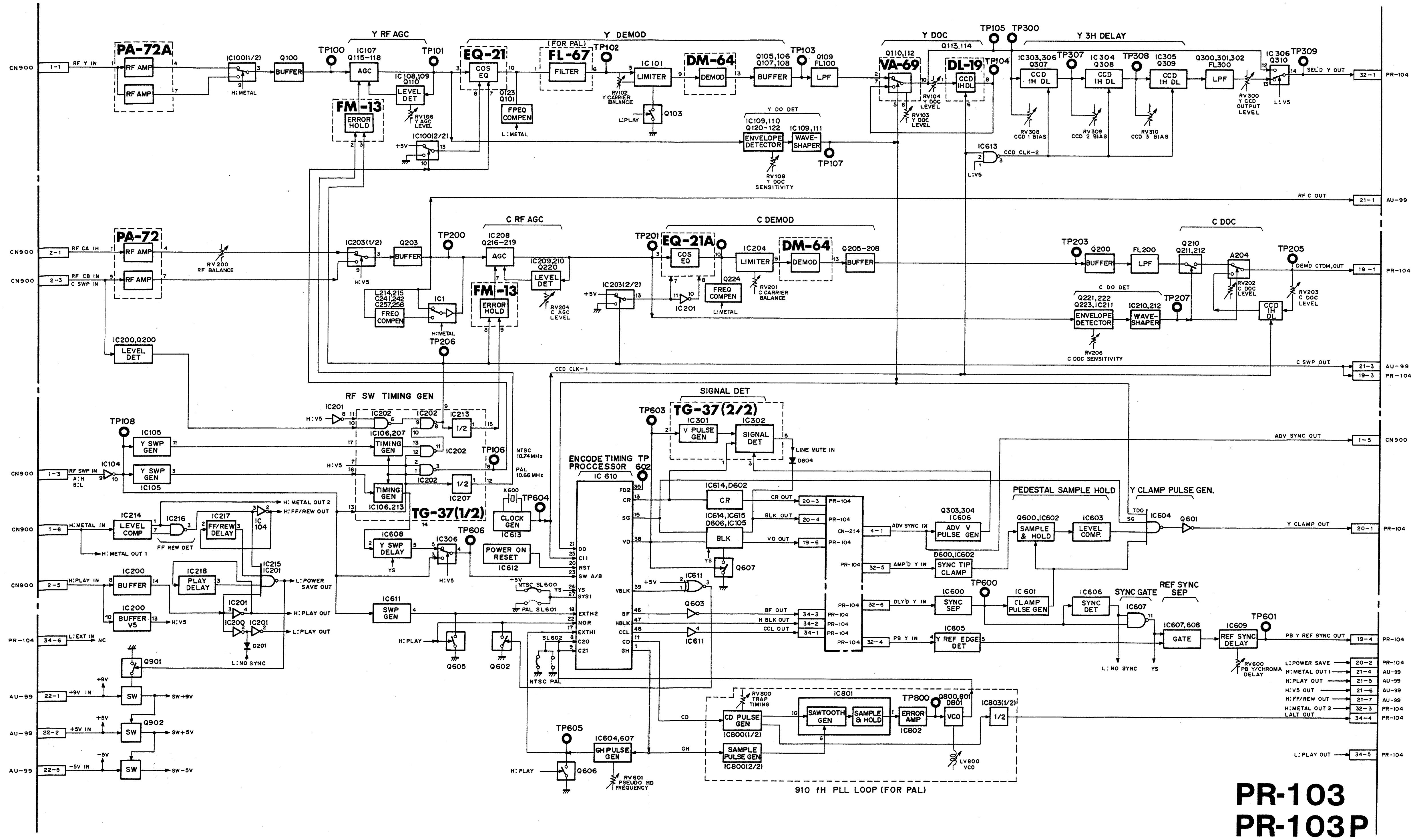
<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr><td>• Insert the CR8-1BPS alignment tape to the BVV-5PS, and play back a 40 Hz, 1 kHz, 7 kHz, 10 kHz and 15 kHz signals.
• DOLBY NR switch : OFF
• AUDIO PB LEVEL switch CH-1 : ON
• AUDIO PB LEVEL volume CH-1 : MAX</td><td>CH-1 AUDIO OUT/VA-500P (at 600 Ω load)<table>
<tr><th>Freq.</th><th>Level</th></tr>
<tr><td>40 Hz</td><td>Reference ± 3 dB</td></tr>
<tr><td>1 kH</td><td>Reference</td></tr>
<tr><td>7 kHz</td><td rowspan="3">Reference ± 3 dB</td></tr>
<tr><td>10 kHz</td></tr>
<tr><td>15 kHz</td></tr>
</table></td><td></td></tr>
</table>

4-13. LNG FREQUENCY RESPONSE CHECK 2CH

<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr><td>• Insert the CR8-1BPS alignment tape to the BVV-5PS, and play back a 40 Hz, 1 kHz, 7 kHz, 10 kHz and 15 kHz signals.
• DOLBY NR switch : OFF
• AUDIO PB LEVEL switch CH-2 : ON
• AUDIO PB LEVEL volume CH-2 : MAX</td><td>CH-2 AUDIO OUT/VA-500P (at 600 Ω load)<table>
<tr><th>Freq.</th><th>Level</th></tr>
<tr><td>40 Hz</td><td>Reference ± 3 dB</td></tr>
<tr><td>1 kH</td><td>Reference</td></tr>
<tr><td>7 kHz</td><td rowspan="3">Reference ± 3 dB</td></tr>
<tr><td>10 kHz</td></tr>
<tr><td>15 kHz</td></tr>
</table></td><td></td></tr>
</table>

SECTION 5
BLOCK DIAGRAMS

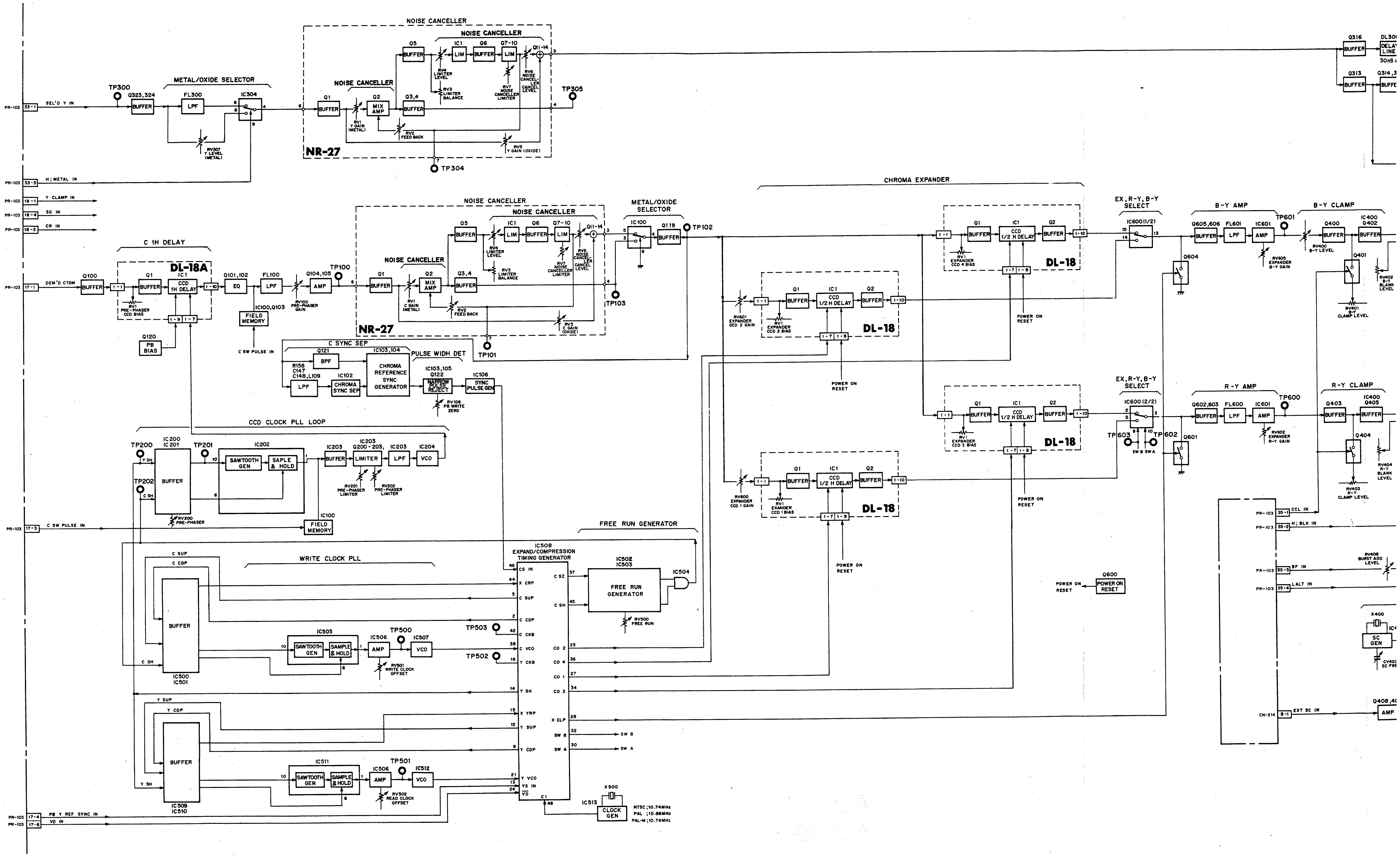
VIDEO RF DEMODULATOR

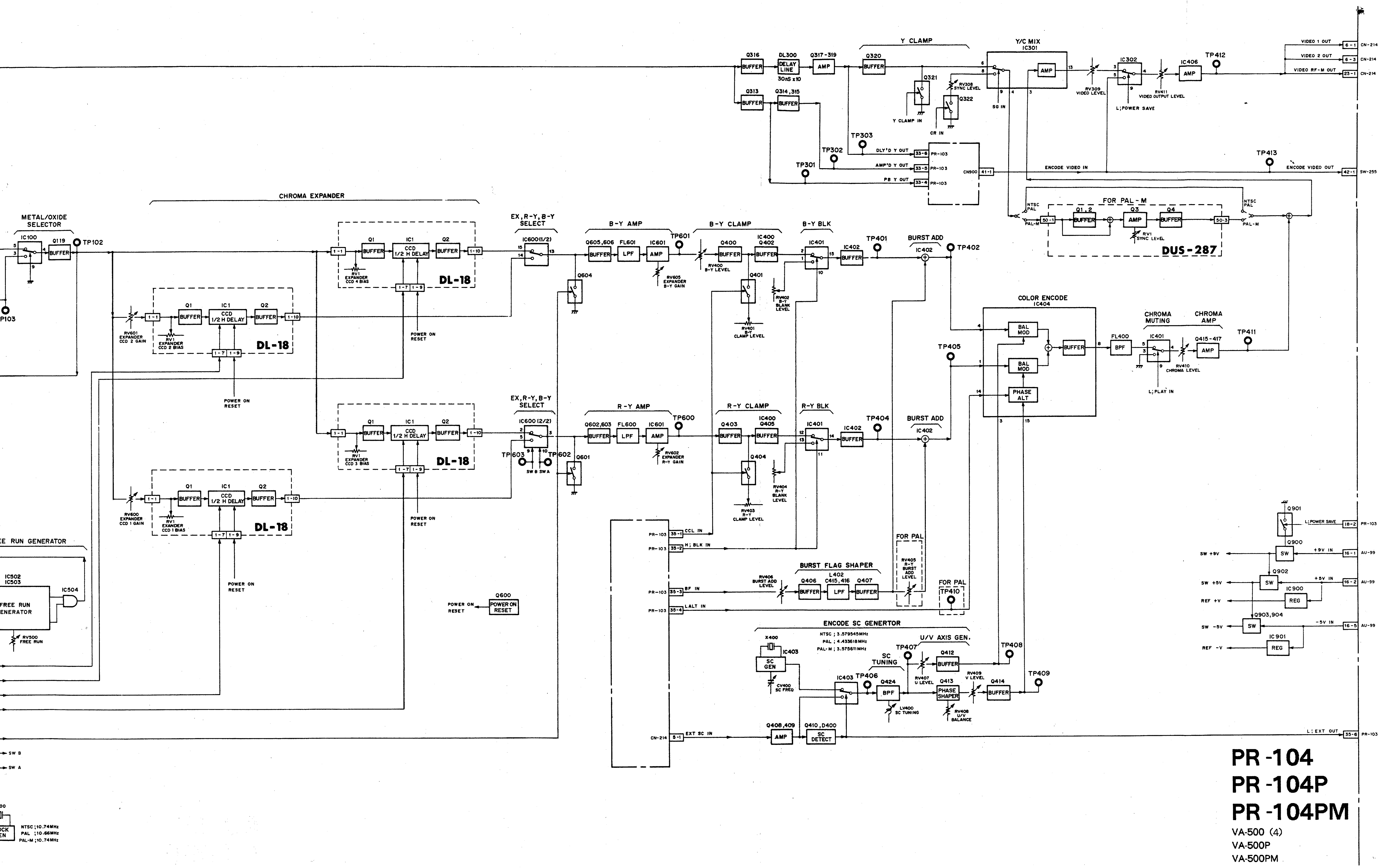

CN900
RF Y IN
PA-72A
RF AMP
RF AMP
IC100(1/2)
H:METAL
Q100
BUFFER
Y RF AGC
TP100
IC107
Q115-118
AGC
TP101
IC108,109
Q110
LEVEL DET
RV106
Y AGC LEVEL
FM-13
ERROR HOLD
IC100(2/2)
+5V
EQ-21
COS EQ
Q123
Q101
FREQ COMPEN
L:METAL
Y DEMOD
(FOR PAL)
FL-67
FILTER
TP102
IC101
LIMITER
RV102
Y CARRIER BALANCE
L:PLAY
Q103
DM-64
DEMOD
Q105,106
Q107,108
BUFFER
TP103
Q109
FL100
LPF
Y DO DET
IC109,110
Q120-122
ENVELOPE DETECTOR
IC109,111
WAVE-SHAPER
TP107
RV108
Y DOC SENSITIVITY
Y DOC
Q110,112
Q113,114
VA-69
RV104
Y DOC LEVEL
RV103
Y DOC LEVEL
DL-19
CCD 1H DL
TP104
TP105
TP300
Y 3H DELAY
IC303,306
Q307
CCD 1H DL
TP307
IC304
Q308
CCD 1H DL
TP308
IC305
Q309
CCD 1H DL
Q300,301,302
FL300
LPF
RV300
Y CCD OUTPUT LEVEL
IC306
Q310
TP309
SEL'D Y OUT
L:V5
RV308
CCD 1 BIAS
RV309
CCD 2 BIAS
RV310
CCD 3 BIAS
IC613
CCD CLK-2
L:V5
32-1
PR-104
RF C OUT
21-1
AU-99
RF CA IN
RF CB IN
C SWP IN
PA-72
RF AMP
RF AMP
RV200
RF BALANCE
IC203(1/2)
H:V5
Q203
BUFFER
L214,215
C241,242
C257,258
FREQ COMPEN
IC1
H:METAL
TP206
TP200
C RF AGC
IC208
Q216-219
AGC
FM-13
ERROR HOLD
IC209,210
Q220
LEVEL DET
RV204
C AGC LEVEL
C DEMOD
TP201
EQ-21A
COS EQ
Q224
FREQ COMPEN
L:METAL
IC204
LIMITER
RV201
C CARRIER BALANCE
IC203(2/2)
IC201
DM-64
DEMOD
Q205-208
BUFFER
TP203
Q200
BUFFER
FL200
LPF
C DOC
Q210
Q211,212
A204
RV202
C DOC LEVEL
TP205
DEMD CTDM OUT
RV203
C DOC LEVEL
19-1
C DO DET
Q221,222
Q223,IC211
ENVELOPE DETECTOR
IC210,212
WAVE-SHAPER
TP207
CCD 1H DL
RV206
C DOC SENSITIVITY
C SWP OUT
21-3
19-3
IC200,Q200
LEVEL DET
CCD CLK-1
RF SW TIMING GEN
IC201
H:V5
IC202
IC202
IC213
1/2
IC106,207
TIMING GEN
IC202
IC202
1/2
IC207
IC106,213
TIMING GEN
TG-37(1/2)
TP106
NTSC 10.74MHz
PAL 10.66MHz
X600
CLOCK GEN
IC613
TP604
TP108
IC105
Y SWP GEN
RF SWP IN
A:H
B:L
IC104
Y SWP GEN
IC105
IC608
Y SWP DELAY
YS
IC306
H:V5
TP606
POWER ON RESET
IC612
H:METAL IN
IC214
LEVEL COMP
H:METAL OUT 1
IC216
FF REW DET
IC217
FF/REW DELAY
IC104
H: METAL OUT 2
H:FF/REW OUT
H:PLAY IN
IC200
BUFFER
IC218
PLAY DELAY
IC215
IC201
L:POWER SAVE OUT
IC200
BUFFER V5
H:V5
IC201
IC200
IC201
D201
H:PLAY OUT
L:PLAY OUT
L:NO SYNC
L:EXT IN
NC
Q901
+9V IN
SW
SW+9V
Q902
+5V IN
SW
SW+5V
-5V IN
SW
SW-5V
IC611
SWP GEN
H:PLAY
Q605
Q602
SL602
NTSC PAL
NTSC SL600
PAL SL601
ENCODE TIMING TP PROCCESSOR 602
IC 610
FD2 CR SG VD VBLK BF HBLK CCL CD GH
DO C11 RST SW A/B YS SYS1 EXTH2 NOR EXTH1 C20 C21
SIGNAL DET
TP603
TG-37(2/2)
IC301
V PULSE GEN
IC302
SIGNAL DET
LINE MUTE IN
D604
IC614,D602
CR
CR OUT
IC614,IC615
D606,IC105
BLK
BLK OUT
VD OUT
Q607
IC611
Q603
Q611
BF OUT
H BLK OUT
CCL OUT
20-3
20-4
19-6
CN-214
34-3
34-2
34-1
PR-104
ADV SYNC IN
Q303,304
IC606
ADV V PULSE GEN
D600,IC602
SYNC TIP CLAMP
AMP'D Y IN
32-5
DLY'D Y IN
32-6
PB Y IN
32-4
TP600
IC600
SYNC SEP
IC605
Y REF EDGE DET
PEDESTAL SAMPLE HOLD
Q600,IC602
SAMPLE & HOLD
IC603
LEVEL COMP
IC 601
CLAMP PULSE GEN
IC606
SYNC DET
SYNC GATE
IC607
REF SYNC SEP
IC607,608
GATE
L:NO SYNC
YS
Y CLAMP PULSE GEN.
TDO
SG
IC604
Q601
Y CLAMP OUT
20-1
ADV SYNC OUT
1-5
CN900
TP601
IC609
REF SYNC DELAY
RV600
PB Y/CHROMA DELAY
PB Y REF SYNC OUT
19-4
L:POWER SAVE 20-2 PR-104
H:METAL OUT 1 21-4 AU-99
H:PLAY OUT 21-5 AU-99
H:V5 OUT 21-6 AU-99
H:FF/REW OUT 21-7 AU-99
H:METAL OUT 2 32-3 PR-104
LALT OUT 34-4 PR-104
L:PLAY OUT 34-5 PR-104
TP605
IC604,607
GH PULSE GEN
H:PLAY
Q606
RV601
PSEUDO HD FREQUENCY
IC801
RV800
TRAP TIMING
CD PULSE GEN
IC800(1/2)
SAWTOOTH GEN
SAMPLE & HOLD
TP800
ERROR AMP
IC802
Q800,801
D801
VCO
IC803(1/2)
1/2
SAMPLE PULSE GEN
IC800(2/2)
LV800
VCO
910 fH PLL LOOP (FOR PAL)
CN900 1-1
CN900 2-1
CN900 2-3
CN900 1-3
CN900 1-6
CN900 2-5
PR-104 34-6
AU-99 22-1
AU-99 22-2
AU-99 22-5

PR-103
PR-103P

VA-500 (4)
VA-500P

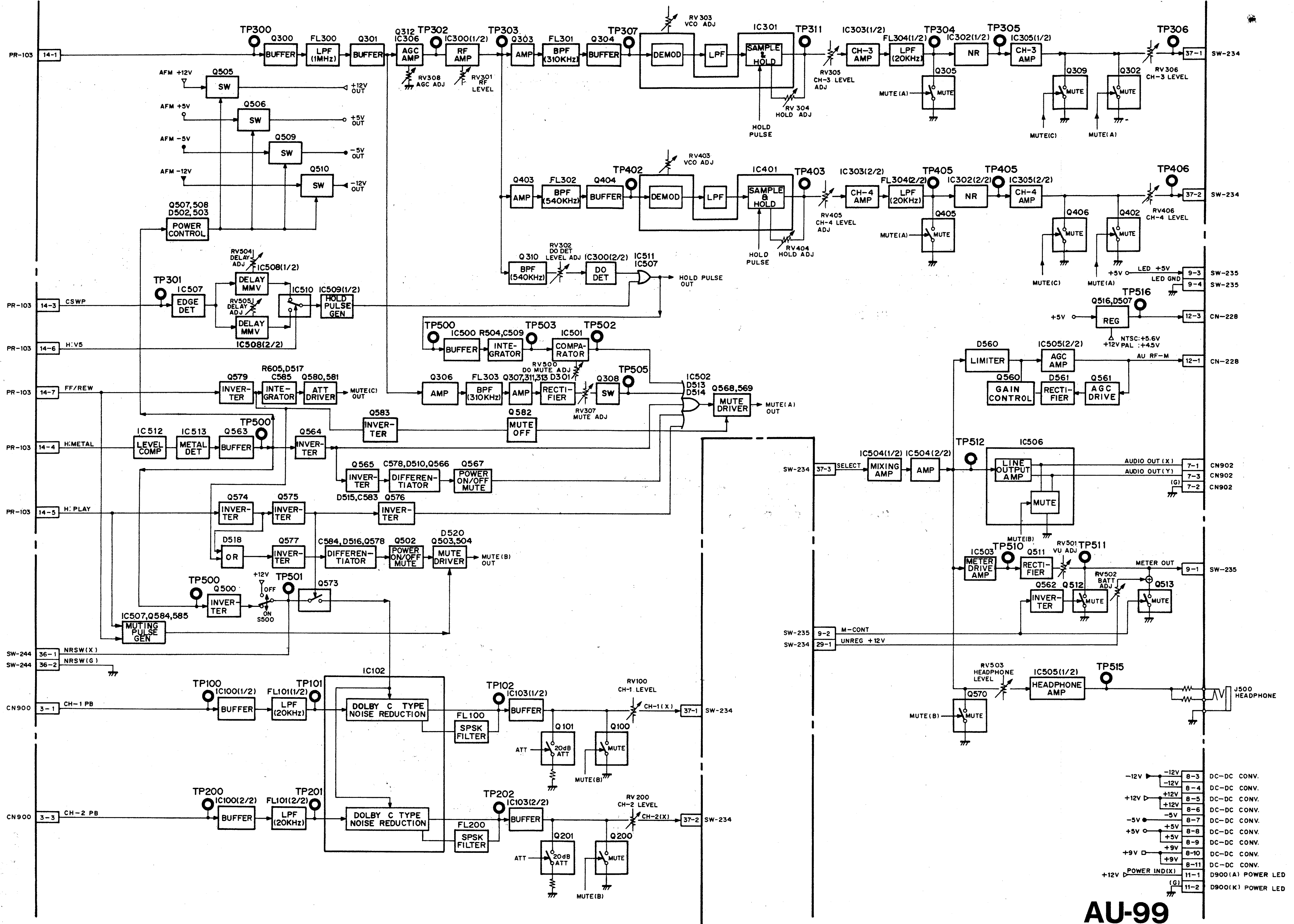
CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX


NOISE CANCELLER
NOISE CANCELLER
NOISE CANCELLER
METAL/OXIDE SELECTOR
TP300
Q323,324
BUFFER
FL300
LPF
IC304
RV307 Y LEVEL (METAL)
PR-103 33-1 SEL'D Y IN
PR-103 33-3 H; METAL IN
PR-103 18-1 Y CLAMP IN
PR-103 18-4 SG IN
PR-103 18-3 CR IN
PR-103 17-1 DEM'D CTDM
PR-103 17-3 C SW PULSE IN
PR-103 17-4 PB Y REF SYNC IN
PR-103 17-6 VD IN
Q1 BUFFER
RV1 Y GAIN (METAL)
Q2 MIX AMP
Q3,4 BUFFER
Q5 BUFFER
IC1 LIM
Q6 BUFFER
Q7-10 LIM
Q11-14
RV4 LIMITER LEVEL
RV3 LIMITER BALANCE
RV7 NOISE CANCELLER LIMITER
RV6 NOISE CANCELLER CANCEL LEVEL
RV2 FEED BACK
RV5 Y GAIN (OXIDE)
NR-27
TP304
TP305
C 1H DELAY
DL-18A
Q100 BUFFER
Q1 BUFFER
IC1 CCD 1H DELAY
RV1 PRE-PHASER CCD BIAS
Q120 PB BIAS
Q101,102 EQ
FL100 LPF
Q104,105 AMP
TP100
RV100 PRE-PHASER GAIN
IC100,Q103 FIELD MEMORY
C SW PULSE IN
RV1 C GAIN (METAL)
RV5 C GAIN (OXIDE)
TP101
TP103
METAL/OXIDE SELECTOR
IC100
Q119 BUFFER
TP102
C SYNC SEP
Q121 BPF
R158 C147 C148,L109 LPF
IC102 CHROMA SYNC SEP
IC103,104 CHROMA REFERENCE SYNC GENERATOR
PULSE WIDH DET
IC103,105 Q122 NARROW PULSE REJECT
RV108 PB WRITE ZERO
IC106 SYNC PULSE GEN
CCD CLOCK PLL LOOP
TP200
IC200 IC201 BUFFER
TP201
IC202 SAWTOOTH GEN SAPLE & HOLD
TP202
RV200 PRE-PHASER
IC203 BUFFER
IC203 Q200-203 LIMITER
IC203 LPF
IC204 VCO
RV201 PRE-PHASER LIMITER
RV202 PRE-PHASER LIMITER
IC100 FIELD MEMORY
FREE RUN GENERATOR
IC508 EXPAND/COMPRESSION TIMING GENERATOR
CS IN
X CRP
C SUP
C CDP
C CKB
C VCO
Y CKB
Y SH
X YRP
Y SUP
Y CDP
Y VCO
YS IN
VD
C1
C SZ
C SH
CO 2
CO 4
CO 1
CO 3
X CLP
SW B
SW A
IC502 IC503 FREE RUN GENERATOR
IC504
RV500 FREE RUN
WRITE CLOCK PLL
C SUP
C CDP
C SH
IC500 IC501 BUFFER
IC505 SAWTOOTH GEN SAMPLE & HOLD
IC506 AMP
TP500
IC507 VCO
RV501 WRITE CLOCK OFFSET
TP503
TP502
Y SUP
Y CDP
Y SH
IC509 IC510 BUFFER
IC511 SAWTOOTH GEN SAMPLE & HOLD
IC506 AMP
TP501
IC512 VCO
RV502 READ CLOCK OFFSET
X500
IC513 CLOCK GEN
NTSC ;10.74MHz
PAL ;10.66MHz
PAL-M ;10.74MHz
CHROMA EXPANDER
DL-18
Q1 BUFFER
IC1 CCD 1/2 H DELAY
Q2 BUFFER
RV1 EXPANDER CCD 4 BIAS
RV1 EXPANDER CCD 2 BIAS
RV1 EXPANDER CCD 3 BIAS
RV1 EXANDER CCD 1 BIAS
RV601 EXPANDER CCD 2 GAIN
RV600 EXPANDER CCD 1 GAIN
POWER ON RESET
EX, R-Y, B-Y SELECT
IC600(1/2)
IC600(2/2)
TP603
TP602
SW B SW A
Q604
Q601
B-Y AMP
Q605,606 BUFFER
FL601 LPF
IC601 AMP
TP601
RV603 EXPANDER B-Y GAIN
B-Y CLAMP
Q400 BUFFER
IC400 Q402 BUFFER
RV400 B-Y LEVEL
Q401
RV401 B-Y CLAMP LEVEL
RV402 B-Y BLANK LEVEL
R-Y AMP
Q602,603 BUFFER
FL600 LPF
IC601 AMP
TP600
RV602 EXPANDER R-Y GAIN
R-Y CLAMP
Q403 BUFFER
IC400 Q405 BUFFER
Q404
RV403 R-Y CLAMP LEVEL
RV404 R-Y BLANK LEVEL
Q600 POWER ON RESET
POWER ON RESET
PR-103 35-1 CCL IN
PR-103 35-2 H; BLK IN
PR-103 35-3 BF IN
PR-103 35-4 LALT IN
RV406 BURST ADD LEVEL
X400
SC GEN
CV400 SC FRE
CN-214 8-1 EXT SC IN
Q408,40 AMP
Q316 BUFFER
DL30 DELAY LINE 30nS
Q313 BUFFER
Q314,3 BUFFE

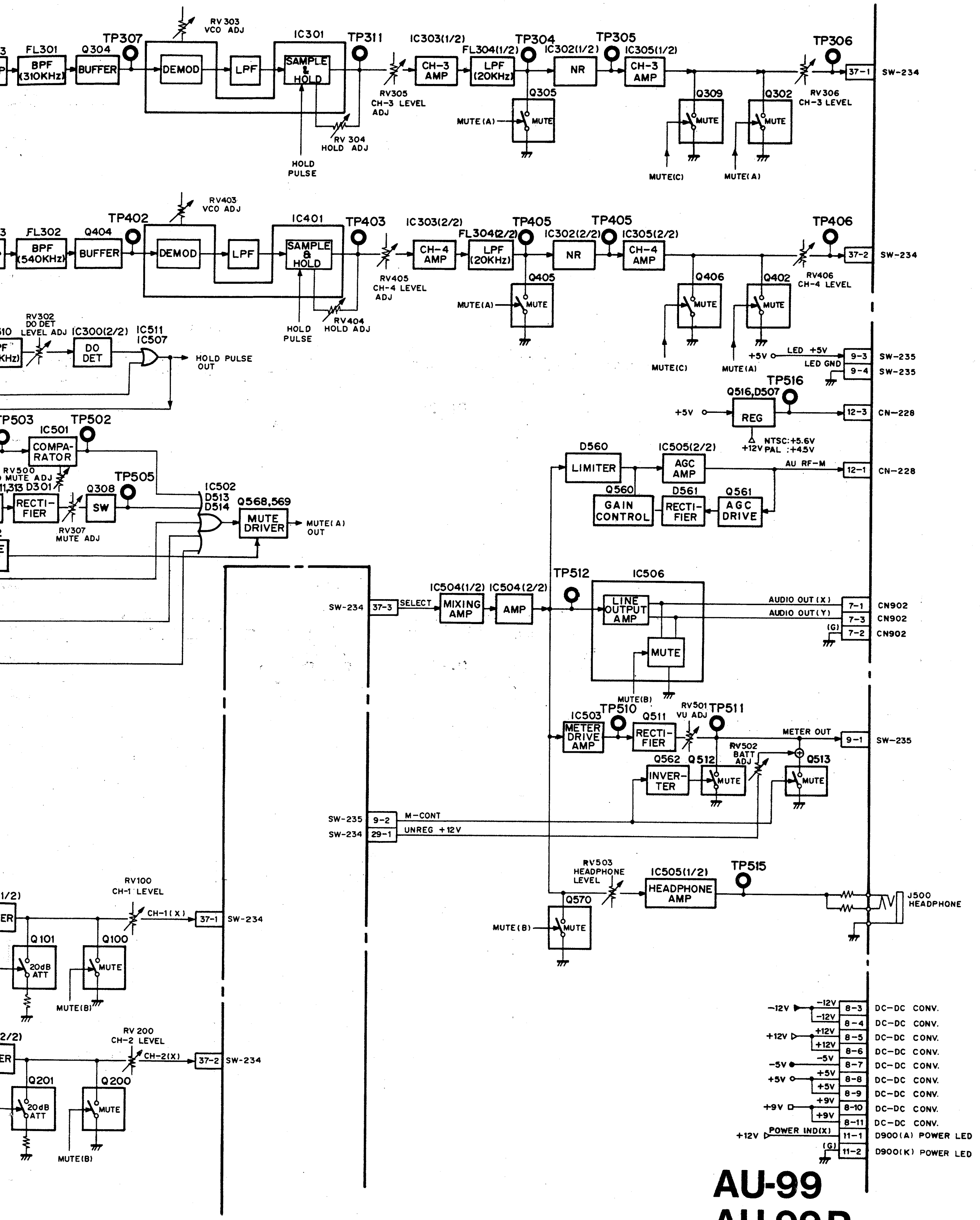

Y CLAMP
Y/C MIX
IC301
Q316
BUFFER
DL300
DELAY LINE
30nS x10
Q317-319
AMP
Q320
Q313
Q314,315
Q321
Q322
RV308 SYNC LEVEL
Y CLAMP IN
CR IN
SG IN
RV309 VIDEO LEVEL
IC302
RV411 VIDEO OUTPUT LEVEL
L; POWER SAVE
IC406
TP412
VIDEO 1 OUT
VIDEO 2 OUT
VIDEO RF-M OUT
CN-214
TP303
TP302
TP301
DLY'D Y OUT
AMP'D Y OUT
PB Y OUT
PR-103
CN900
ENCODE VIDEO IN
TP413
ENCODE VIDEO OUT
SW-255
CHROMA EXPANDER
METAL/OXIDE SELECTOR
IC100
Q119
TP102
TP103
Q1
IC1
Q2
CCD 1/2 H DELAY
DL-18
RV1 EXPANDER CCD 4 BIAS
RV601 EXPANDER CCD 2 GAIN
RV1 EXPANDER CCD 2 BIAS
POWER ON RESET
EX, R-Y, B-Y SELECT
IC600(1/2)
IC600(2/2)
Q604
Q601
TP603
TP602
SW B
SW A
B-Y AMP
Q605,606
FL601
LPF
IC601
TP601
RV605 EXPANDER B-Y GAIN
B-Y CLAMP
Q400
IC400
Q402
RV400 B-Y LEVEL
Q401
RV401 B-Y CLAMP LEVEL
B-Y BLK
IC401
RV402 B-Y BLANK LEVEL
IC402
TP401
BURST ADD
TP402
FOR PAL-M
NTSC PAL
PAL-M
Q1,2
Q3
Q4
RV1 SYNC LEVEL
DUS-287
COLOR ENCODE
IC404
BAL MOD
PHASE ALT
TP405
FL400
BPF
CHROMA MUTING
CHROMA AMP
Q415-417
RV410 CHROMA LEVEL
L; PLAY IN
TP411
R-Y AMP
Q602,603
FL600
TP600
RV602 EXPANDER R-Y GAIN
R-Y CLAMP
Q403
Q405
Q404
RV403 R-Y CLAMP LEVEL
R-Y BLK
RV404 R-Y BLANK LEVEL
TP404
RV600 EXPANDER CCD 1 GAIN
RV1 EXANDER CCD 3 BIAS
FREE RUN GENERATOR
IC502
IC503
IC504
FREE RUN GENERATOR
RV500 FREE RUN
Q600
POWER ON RESET
CCL IN
H; BLK IN
BF IN
LALT IN
EXT SC IN
BURST FLAG SHAPER
RV406 BURST ADD LEVEL
Q406
L402
C415,416
Q407
FOR PAL
RV405 R-Y BURST ADD LEVEL
TP410
ENCODE SC GENERTOR
X400
IC403
SC GEN
CV400 SC FREQ
NTSC ; 3.579545MHz
PAL ; 4.433618MHz
PAL-M ; 3.575611MHz
SC TUNING
TP406
Q424
LV400 SC TUNING
U/V AXIS GEN.
TP407
Q412
RV407 U LEVEL
Q413
PHASE SHAPER
RV408 U/V BALANCE
RV409 V LEVEL
Q414
TP408
TP409
Q408,409
Q410,D400
SC DETECT
L; EXT OUT
Q901
L; POWER SAVE
Q900
SW +9V
+9V IN
Q902
SW +5V
+5V IN
IC900
REF +V
REG
Q903,904
SW -5V
-5V IN
IC901
REF -V
AU-99
SW B
SW A
NTSC ; 10.74MHz
PAL ; 10.66MHz
PAL-M ; 10.74MHz

PR-104
PR-104P
PR-104PM
VA-500 (4)
VA-500P
VA-500PM

AUDIO SYSTEM


PR-103 14-1
TP300
Q300 BUFFER
FL300 LPF (1MHz)
Q301 BUFFER
Q312 IC306 AGC AMP
RV308 AGC ADJ
TP302
IC300(1/2) RF AMP
RV301 RF LEVEL
TP303
Q303 AMP
FL301 BPF (310KHz)
Q304 BUFFER
TP307
RV303 VCO ADJ
IC301
DEMOD
LPF
SAMPLE & HOLD
RV304 HOLD ADJ
HOLD PULSE
TP311
RV305 CH-3 LEVEL ADJ
IC303(1/2) CH-3 AMP
FL304(1/2) LPF (20KHz)
TP304
IC302(1/2) NR
Q305 MUTE
MUTE(A)
TP305
IC305(1/2) CH-3 AMP
Q309 MUTE
Q302 MUTE
MUTE(C)
MUTE(A)
TP306
RV306 CH-3 LEVEL
37-1 SW-234
AFM +12V
Q505 SW
+12V OUT
AFM +5V
Q506 SW
+5V OUT
AFM -5V
Q509 SW
-5V OUT
AFM -12V
Q510 SW
-12V OUT
Q507,508 D502,503 POWER CONTROL
Q403 AMP
FL302 BPF (540KHz)
Q404 BUFFER
TP402
RV403 VCO ADJ
IC401
DEMOD
LPF
SAMPLE & HOLD
RV404 HOLD ADJ
HOLD PULSE
TP403
RV405 CH-4 LEVEL ADJ
IC303(2/2) CH-4 AMP
FL304(2/2) LPF (20KHz)
TP405
IC302(2/2) NR
Q405 MUTE
MUTE(A)
TP405
IC305(2/2) CH-4 AMP
Q406 MUTE
Q402 MUTE
MUTE(C)
MUTE(A)
TP406
RV406 CH-4 LEVEL
37-2 SW-234
Q310 BPF (540KHz)
RV302 DO DET LEVEL ADJ
IC300(2/2) DO DET
IC511 IC507
HOLD PULSE OUT
+5V
LED +5V
LED GND
9-3 SW-235
9-4 SW-235
TP516
Q516,D507 REG
NTSC:+5.6V PAL :+4.5V
+12V
12-3 CN-228
RV504 DELAY ADJ
IC508(1/2) DELAY MMV
TP301
IC507 EDGE DET
RV505 DELAY ADJ
DELAY MMV
IC508(2/2)
IC510
IC509(1/2) HOLD PULSE GEN
PR-103 14-3 CSWP
PR-103 14-6 H:V5
TP500
IC500 R504,C509 BUFFER
INTE-GRATOR
TP503
IC501 COMPA-RATOR
TP502
RV500 DO MUTE ADJ
PR-103 14-7 FF/REW
Q579 INVER-TER
R605,D517 C585 INTE-GRATOR
Q580,581 ATT DRIVER
MUTE(C) OUT
Q306 AMP
FL303 BPF (310KHz)
Q307,311,313 AMP
D301 RECTI-FIER
RV307 MUTE ADJ
Q308 SW
TP505
IC502 D513 D514
Q568,569 MUTE DRIVER
MUTE(A) OUT
Q583 INVER-TER
Q582 MUTE OFF
PR-103 14-4 H:METAL
IC512 LEVEL COMP
IC513 METAL DET
Q563 BUFFER
TP500
Q564 INVER-TER
Q565 INVER-TER
C578,D510,Q566 DIFFEREN-TIATOR
Q567 POWER ON/OFF MUTE
PR-103 14-5 H: PLAY
Q574 INVER-TER
Q575 INVER-TER
D515,C583 Q576 INVER-TER
D518 OR
Q577 INVER-TER
C584,D516,Q578 DIFFEREN-TIATOR
Q502 POWER ON/OFF MUTE
D520 Q503,504 MUTE DRIVER
MUTE(B) OUT
TP500
Q500 INVER-TER
+12V OFF ON S500
TP501
Q573
IC507,Q584,585 MUTING PULSE GEN
SW-244 36-1 NRSW(X)
SW-244 36-2 NRSW(G)
IC102
CN900 3-1 CH-1 PB
TP100
IC100(1/2) BUFFER
TP101
FL101(1/2) LPF (20KHz)
DOLBY C TYPE NOISE REDUCTION
FL100 SPSK FILTER
TP102
IC103(1/2) BUFFER
Q101 20dB ATT
ATT
Q100 MUTE
MUTE(B)
RV100 CH-1 LEVEL
CH-1(X)
37-1 SW-234
CN900 3-3 CH-2 PB
TP200
IC100(2/2) BUFFER
TP201
FL101(2/2) LPF (20KHz)
DOLBY C TYPE NOISE REDUCTION
FL200 SPSK FILTER
TP202
IC103(2/2) BUFFER
Q201 20dB ATT
ATT
Q200 MUTE
MUTE(B)
RV200 CH-2 LEVEL
CH-2(X)
37-2 SW-234
D560 LIMITER
IC505(2/2) AGC AMP
AU RF-M
12-1 CN-228
Q560 GAIN CONTROL
D561 RECTI-FIER
Q561 AGC DRIVE
SW-234 37-3 SELECT
IC504(1/2) MIXING AMP
IC504(2/2) AMP
TP512
IC506 LINE OUTPUT AMP
MUTE
MUTE(B)
AUDIO OUT(X) 7-1 CN902
AUDIO OUT(Y) 7-3 CN902
(G) 7-2 CN902
IC503 METER DRIVE AMP
TP510
Q511 RECTI-FIER
RV501 VU ADJ
TP511
RV502 BATT ADJ
METER OUT
9-1 SW-235
Q562 INVER-TER
Q512 MUTE
Q513 MUTE
SW-235 9-2 M-CONT
SW-234 29-1 UNREG +12V
RV503 HEADPHONE LEVEL
IC505(1/2) HEADPHONE AMP
TP515
J500 HEADPHONE
Q570 MUTE
MUTE(B)
-12V 8-3 DC-DC CONV.
-12V 8-4 DC-DC CONV.
+12V 8-5 DC-DC CONV.
+12V 8-6 DC-DC CONV.
-5V 8-7 DC-DC CONV.
+5V 8-8 DC-DC CONV.
+5V 8-9 DC-DC CONV.
+9V 8-10 DC-DC CONV.
+9V 8-11 DC-DC CONV.
+12V POWER IND(X) 11-1 D900(A) POWER LED
(G) 11-2 D900(K) POWER LED

AU-99
AU-99P
VA-500 (2)
VA-500P


FL301
BPF (310KHz)
Q304
BUFFER
TP307
RV303 VCO ADJ
DEMOD
LPF
IC301
SAMPLE & HOLD
RV304 HOLD ADJ
HOLD PULSE
TP311
RV305 CH-3 LEVEL ADJ
IC303(1/2)
CH-3 AMP
FL304(1/2)
LPF (20KHz)
TP304
IC302(1/2)
NR
TP305
IC305(1/2)
CH-3 AMP
Q305
MUTE(A)
MUTE
Q309
Q302
MUTE(C)
MUTE(A)
RV306 CH-3 LEVEL
TP306
37-1
SW-234
FL302
BPF (540KHz)
Q404
BUFFER
TP402
RV403 VCO ADJ
DEMOD
LPF
IC401
SAMPLE & HOLD
RV404 HOLD ADJ
HOLD PULSE
TP403
RV405 CH-4 LEVEL ADJ
IC303(2/2)
CH-4 AMP
FL304(2/2)
LPF (20KHz)
TP405
IC302(2/2)
NR
TP405
IC305(2/2)
CH-4 AMP
Q405
MUTE(A)
Q406
Q402
MUTE(C)
MUTE(A)
RV406 CH-4 LEVEL
TP406
37-2
SW-234
RV302 DO DET LEVEL ADJ
IC300(2/2)
DO DET
IC511
IC507
HOLD PULSE OUT
+5V
LED +5V
LED GND
9-3
9-4
SW-235
SW-235
TP516
Q516,D507
REG
+5V
12-3
CN-228
NTSC:+5.6V
PAL :+4.5V
+12V
TP503
TP502
IC501
COMPA-RATOR
RV500 MUTE ADJ
D301
D311,313
RECTI-FIER
RV307 MUTE ADJ
Q308
SW
TP505
IC502
D513
D514
Q568,569
MUTE DRIVER
MUTE(A) OUT
D560
LIMITER
IC505(2/2)
AGC AMP
AU RF-M
12-1
CN-228
Q560
GAIN CONTROL
D561
RECTI-FIER
Q561
AGC DRIVE
SW-234
37-3
SELECT
IC504(1/2)
MIXING AMP
IC504(2/2)
AMP
TP512
IC506
LINE OUTPUT AMP
MUTE
MUTE(B)
AUDIO OUT(X)
AUDIO OUT(Y)
(G)
7-1
7-3
7-2
CN902
CN902
CN902
IC503
METER DRIVE AMP
TP510
Q511
RECTI-FIER
RV501 VU ADJ
TP511
METER OUT
9-1
SW-235
RV502 BATT ADJ
Q562
INVER-TER
Q512
MUTE
Q513
MUTE
SW-235
9-2
M-CONT
SW-234
29-1
UNREG +12V
RV503 HEADPHONE LEVEL
IC505(1/2)
HEADPHONE AMP
TP515
Q570
MUTE(B)
MUTE
J500 HEADPHONE
RV100 CH-1 LEVEL
CH-1(X)
37-1
SW-234
Q101
20dB ATT
Q100
MUTE
MUTE(B)
RV200 CH-2 LEVEL
CH-2(X)
37-2
SW-234
Q201
20dB ATT
Q200
MUTE
MUTE(B)
-12V
-12V
-12V
8-3
8-4
DC-DC CONV.
+12V
+12V
+12V
8-5
8-6
-5V
-5V
8-7
+5V
+5V
+5V
8-8
8-9
+9V
+9V
+9V
8-10
8-11
+12V
POWER IND(X)
11-1
D900(A) POWER LED
(G)
11-2
D900(K) POWER LED

AU-99
AU-99P

VA-500 (2)
VA-500P

SECTION 6
SEMICONDUCTOR ELECTRODES

ここに記載されているIC，トランジスタ，ダイオードは，それぞれの機能を等価的に表わしたものです。したがって互換性を表わすものではありません。（互換性のない型名が併記されている事もあります。）部品の交換をする時は，SPARE PARTSの章を参照して下さい。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

TYPE	PAGE
10E-2	6-11
1S2835	6-11
1S2837	6-11
1SS119	6-11
1SS123	6-11
1SS131	6-11
1T33	6-11
2SA1037K	6-11
2SA1048	6-11
2SA1162	6-11
2SA1179	6-11
2SA1226	6-11
2SA812	6-11
2SB793	6-11
2SB822	6-11
2SC1623	6-11
2SC2412K	6-11
2SC2712	6-11
2SC2714	6-11
2SC2715	6-11
2SC2812	6-11
2SC3052	6-11
2SC3326N	6-11
2SD1055	6-11
2SD774	6-11
2SD973	6-11
2SK209	6-11
2SK94	6-11
AN3920K	6-2
AN3922NK	6-2
BD703G	6-11
BX1461	6-2
BX1481	6-2
CX20099	6-3
CX20111	6-3
CX20158	6-3
CX22017	6-3
CX23084	6-4
CX7993A	6-4
CXA1039M	6-5
CXA1097Q	6-5
CXL5001M	6-5
CXL5002M	6-6
DA204K	6-11
DAN202K	6-11
DAP202K	6-11
DTA114TK	6-11
DTA114YK	6-11
DTA144TK	6-11
DTC114EK	6-11
DTC114TK	6-11
DTC114YK	6-11
DTC124EK	6-11
DTC124XK	6-11
DTC144EK	6-11
DTC144TK	6-11
ERA84-009	6-11
ERC81-004	6-11
MA151WA	6-11
MA151WK	6-11
MA153	6-11
MC10H107M	6-6
MC10H116M	6-6
MC74HC00F	6-6
MC74HC02F	6-6
MC74HC163F	6-6
MC74HC20F	6-6
MC74HC74F	6-7
MC74HC86F	6-7
NJM1496M	6-7
NJM2903M	6-7
NJM4560M	6-7
NJM78L ? ?A	6-7
NJM79L ? ?A	6-7
RD ? ?EB?	6-11
RD ? ?MB?	6-11
S-805 ? ?	6-7
SLH-34YC3	6-11
SN16913P	6-7
SN74HC21NS	6-8
SN74LS06NS	6-8
SN74LS123NS	6-8
SN74LS221NS	6-8
SN74LS624NS	6-8
TA7357AP	6-8
TC4001BF	6-8
TC4030BFHB	6-8
TC4049BF	6-8
TC4052BFHB	6-9
TC4053BFHB	6-9
TC4538BF	6-9
TC504013BF	6-9
TC74HC00F	6-6
TC74HC02F	6-6
TC74HC163F	6-6
TC74HC20F	6-6
TC74HC221F	6-9
TC74HC74F	6-7
TC74HC86F	6-7
TL072CPS	6-9
TL082CPS	6-9
TL084CNS	6-9
TL592PS	6-9
TX429M	6-11
uPC1555C	6-10
uPC1663G	6-10
uPC319G2	6-10
uPC339G2	6-10
uPC393G2	6-7
uPC4082G2	6-9

等価回路はICメーカーのData Bookに従いました。

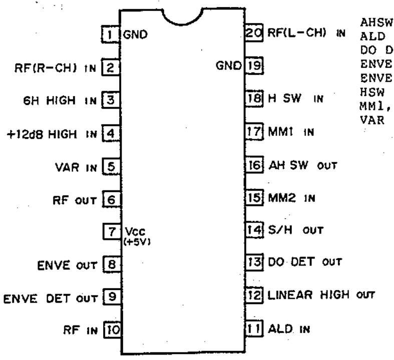
The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

IC

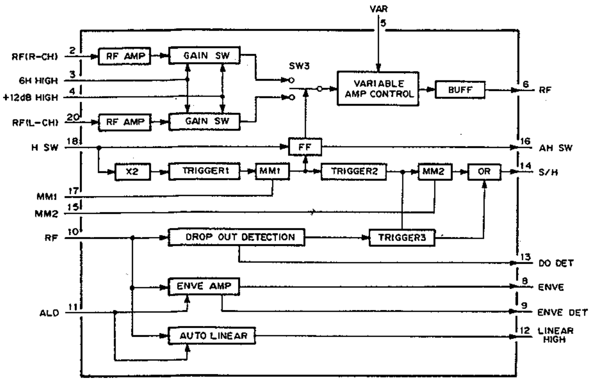
AN3920K (MATSUSHITA)

VTR FM AUDIO RF AMP

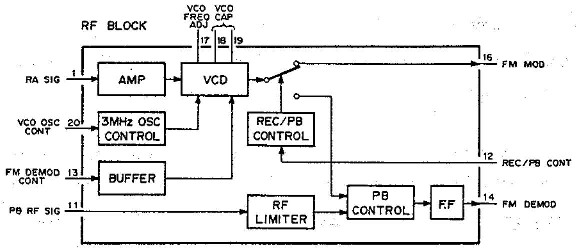
— TOP VIEW —


1 GND
RF(R-CH) IN 2
6H HIGH IN 3
+12dB HIGH IN 4
VAR IN 5
RF OUT 6
7 Vcc (+5V)
ENVE OUT 8
ENVE DET OUT 9
RF IN 10
20 RF(L-CH) IN
GND 19
18 H SW IN
17 MM1 IN
16 AH SW OUT
15 MM2 IN
14 S/H OUT
13 DO DET OUT
12 LINEAR HIGH OUT
11 ALD IN

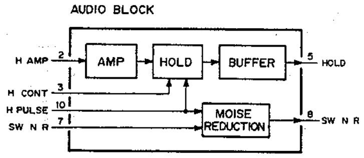
AHSW ; AUDIO HOLD SWITCH OUTPUT
ALD ; AUTO LINEAR DETECT INPUT
DO DET ; DROP OUT DETECT OUTPUT
ENVE ; ENVELOPE OUTPUT
ENVE DET ; ENVELOPE DETECTOR OUTPUT
HSW ; HOLD SWITCH INPUT
MM1,2 ; MONO MULTI
VAR ; VARIABLE AMP CONTROL INPUT


VAR
5
RF(R-CH) 2
6H HIGH 3
+12dB HIGH 4
RF(L-CH) 20
H SW 18
MM1 17
MM2 15
RF 10
ALD 11
RF AMP
GAIN SW
RF AMP
GAIN SW
SW3
VARIABLE AMP CONTROL
BUFF
FF
X2
TRIGGER1
MM1
TRIGGER2
MM2
OR
DROP OUT DETECTION
TRIGGER3
ENVE AMP
AUTO LINEAR
6 RF
16 AH SW
14 S/H
13 DO DET
8 ENVE
9 ENVE DET
12 LINEAR HIGH

RF BLOCK


VCO FREQ ADJ
VCO CAP
17
18
19
RA SIG 1
VCO OSC CONT 20
FM DEMOD CONT 13
PB RF SIG 11
AMP
VCD
3MHz OSC CONTROL
REC/PB CONTROL
BUFFER
RF LIMITER
PB CONTROL
F.F
16 FM MOD
12 REC/PB CONT
14 FM DEMOD

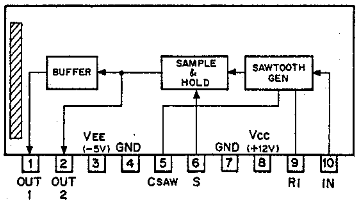
AUDIO BLOCK


H AMP 2
H CONT 3
H PULSE 10
SW N R 7
AMP
HOLD
BUFFER
MOISE REDUCTION
5 HOLD
8 SW N R

BX1461 (SONY)

PHASE DETECTOR

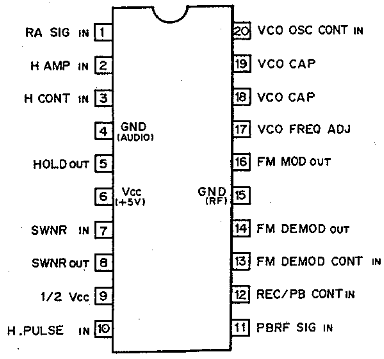
— PRINTED SIDE —


BUFFER
SAMPLE & HOLD
SAWTOOTH GEN
VEE (−5V)
GND
GND
Vcc (+12V)
1
2
3
4
5
6
7
8
9
10
OUT 1
OUT 2
CSAW
S
RI
IN

AN3922NK (MATSUSHITA)

VTR, FM AUDIO MODULATOR AND DEMODULATOR

— TOP VIEW —

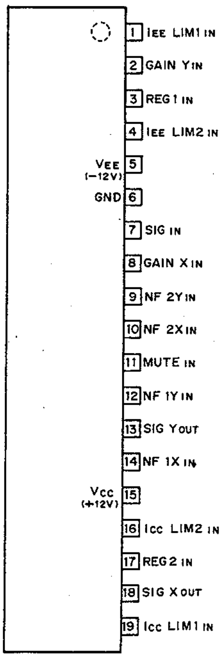

RA SIG IN 1
H AMP IN 2
H CONT IN 3
4 GND (AUDIO)
HOLD OUT 5
6 Vcc (+5V)
SWNR IN 7
SWNR OUT 8
1/2 Vcc 9
H.PULSE IN 10
20 VCO OSC CONT IN
19 VCO CAP
18 VCO CAP
17 VCO FREQ ADJ
16 FM MOD OUT
GND (RF) 15
14 FM DEMOD OUT
13 FM DEMOD CONT IN
12 REC/PB CONT IN
11 PBRF SIG IN

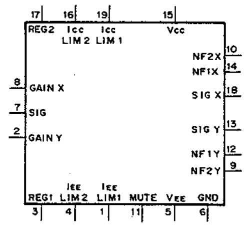
FM DEMOD ; FM DEMODULATION OUTPUT
FM DEMOD CONT ; FM DEMODULATION CONTROL INPUT
FM MOD ; FM MODULATION OUTPUT
H AMP ; HOLD AMP INPUT
H CONT ; HOLD CONTROL INPUT
H PULSE ; HOLD PULSE INPUT
PBRF SIG ; PB RF SIGNAL INPUT
RA SIG ; REC AUDIO SIGNAL INPUT
REC/PB CONT ; REC/PB CONTROL INPUT
SWNR ; SWITCH NOISE REDUCTION INPUT/OUTPUT
VCO CAP ; VCO CAPACITOR
VCO FREQ ADJ ; VCO FREQUENCY ADJUSTMENT
VCO OSC CONT ; VCO OSCILLATION CONTROL INPUT

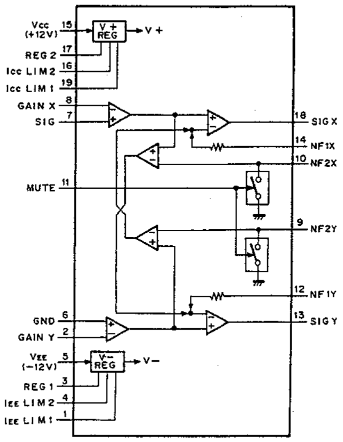
BX1481 (SONY)

AUDIO LINE AMPLIFIER

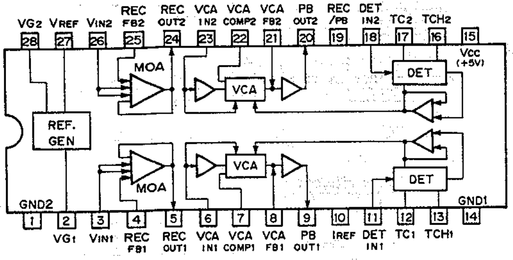
— REAR VIEW —


1 IEE LIM1 IN
2 GAIN Y IN
3 REG1 IN
4 IEE LIM2 IN
VEE (−12V) 5
GND 6
7 SIG IN
8 GAIN X IN
9 NF 2Y IN
10 NF 2X IN
11 MUTE IN
12 NF 1Y IN
13 SIG Y OUT
14 NF 1X IN
Vcc (+12V) 15
16 Icc LIM2 IN
17 REG2 IN
18 SIG X OUT
19 Icc LIM1 IN


17
16
19
15
REG2
Icc LIM2
Icc LIM1
Vcc
10 NF2X
14 NF1X
18 SIG X
13 SIG Y
12 NF1Y
9 NF2Y
8 GAIN X
7 SIG
2 GAIN Y
REG1
IEE LIM2
IEE LIM1
MUTE
VEE
GND
3
4
1
11
5
6

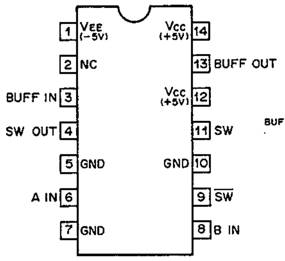

Vcc (+12V) 15
V+ REG
V+
REG 2 17
Icc LIM2 16
Icc LIM1 19
GAIN X 8
SIG 7
MUTE 11
GND 6
GAIN Y 2
VEE (−12V) 5
V− REG
V−
REG 1 3
IEE LIM2 4
IEE LIM1 1
18 SIG X
14 NF1X
10 NF2X
9 NF2Y
12 NF1Y
13 SIG Y

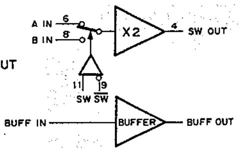
CX20099 (SONY)
VOLTAGE CONTROLLED AMP/DETECTOR/MAIN OPERATIONAL AMP
— TOP VIEW —


VG2
VREF
VIN2
REC FB2
REC OUT2
VCA IN2
VCA COMP2
VCA FB2
PB OUT2
REC /PB
DET IN2
TC2
TCH2
Vcc (+5V)
MOA
VCA
DET
REF. GEN
GND2
GND1
VG1
VIN1
REC FB1
REC OUT1
VCA IN1
VCA COMP1
VCA FB1
PB OUT1
IREF
DET IN1
TC1
TCH1
28
27
26
25
24
23
22
21
20
19
18
17
16
15
1
2
3
4
5
6
7
8
9
10
11
12
13
14

DET ; DETECTOR
TC ; TIME CONSTANT
TCH ; TIME CONSTANT HOLD
VCA ; VOLTAGE CONTROLLED AMP

CX20158 (SONY)
VIDEO SWITCHER AND BUFFER
— TOP VIEW —

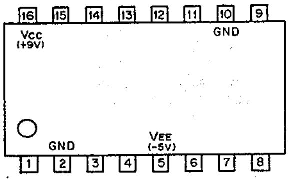

1 VEE (−5V)
2 NC
BUFF IN 3
SW OUT 4
5 GND
A IN 6
7 GND
14 Vcc (+5V)
13 BUFF OUT
12 Vcc (+5V)
11 SW
GND 10
9 $\overline{SW}$
8 B IN

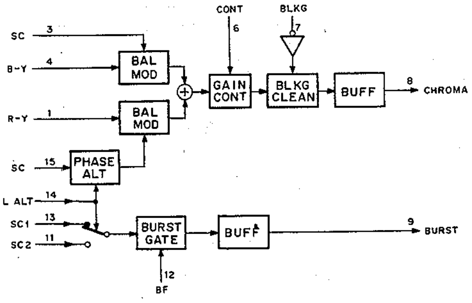

A IN 6
B IN 8
X2
4 SW OUT
11 9
SW $\overline{SW}$
BUFF IN
BUFFER
BUFF OUT

SW	$\overline{SW}$	INPUT
0	0	—
0	1	B
1	0	A
1	1	—

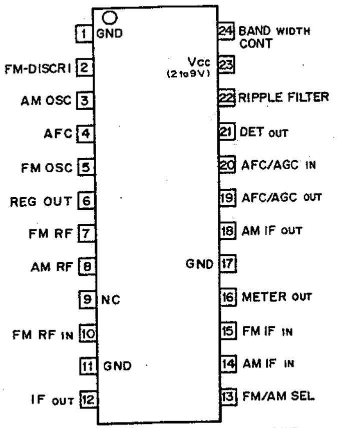
0 ;LOW LEVEL
1 ;HIGH LEVEL
– ;INDEFINITE

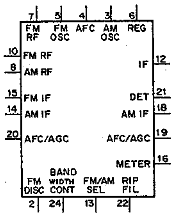
CX22017 (SONY)
VIDEO SIGNAL PROCESSOR
— TOP VIEW —

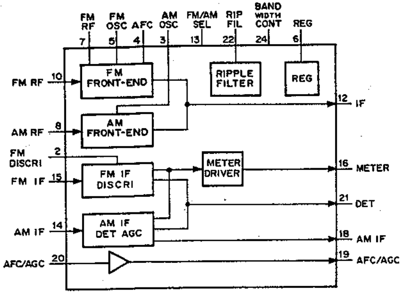

16
15
14
13
12
11
10
9
Vcc (+9V)
GND
GND
VEE (−5V)
1
2
3
4
5
6
7
8


CONT
BLKG
SC 3
B−Y 4
R−Y 1
6
7
BAL MOD
BAL MOD
GAIN CONT
BLKG CLEAN
BUFF
8 CHROMA
SC 15
PHASE ALT
L ALT 14
SC1 13
SC2 11
BURST GATE
BUFF
9 BURST
12 BF

CX20111 (SONY) FLAT PACKAGE
FM/AM FRONT-END/IF/DET PROCESSOR
— TOP VIEW —


1 GND
FM-DISCRI 2
AM OSC 3
AFC 4
FM OSC 5
REG OUT 6
FM RF 7
AM RF 8
9 NC
FM RF IN 10
11 GND
IF OUT 12
24 BAND WIDTH CONT
Vcc (2 to 9V) 23
22 RIPPLE FILTER
21 DET OUT
20 AFC/AGC IN
19 AFC/AGC OUT
18 AM IF OUT
GND 17
16 METER OUT
15 FM IF IN
14 AM IF IN
13 FM/AM SEL

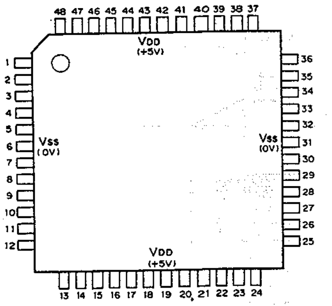

7 5 4 3 6
FM RF
FM OSC
AFC
AM OSC
REG
10 FM RF
8 AM RF
IF 12
15 FM IF
14 AM IF
DET 21
AM IF 18
20 AFC/AGC
AFC/AGC 19
METER 16
FM DISC
BAND WIDTH CONT
FM/AM SEL
RIP FIL
2 24 13 22


FM RF
FM OSC
AFC
AM OSC
FM/AM SEL
RIP FIL
BAND WIDTH CONT
REG
7 5 4 3 13 22 24 6
FM RF 10
FM FRONT-END
RIPPLE FILTER
REG
12 IF
AM RF 8
AM FRONT-END
FM DISCRI 2
FM IF 15
FM IF DISCRI
METER DRIVER
16 METER
21 DET
AM IF 14
AM IF DET AGC
18 AM IF
AFC/AGC 20
19 AFC/AGC

CX23084 (SONY) FLAT PACKAGE

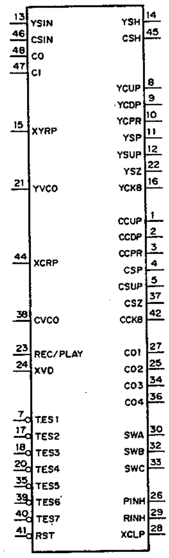
C-MOS TIMING GENERATOR/CCD CLOCK GENERATOR

— TOP VIEW —

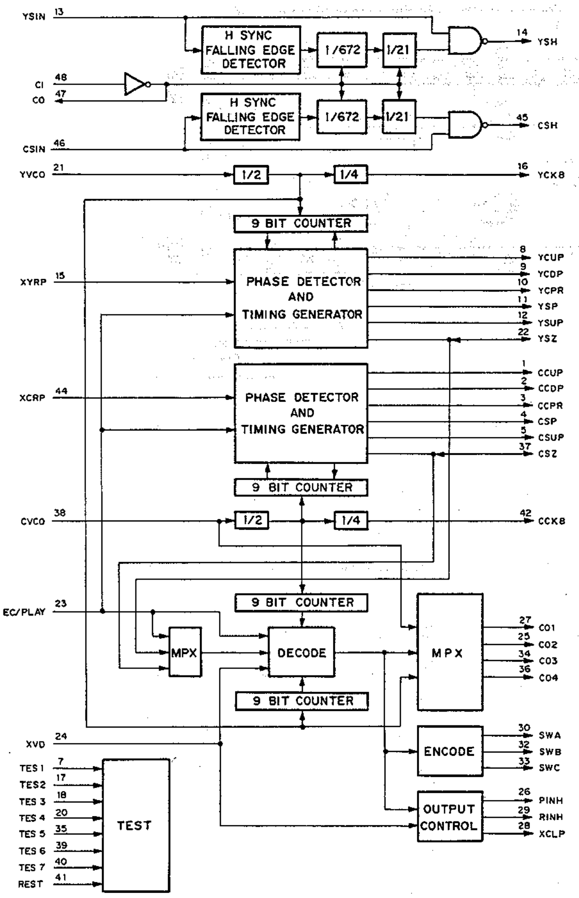

48 47 46 45 44 43 42 41 40 39 38 37
1 2 3 4 5 6 7 8 9 10 11 12
36 35 34 33 32 31 30 29 28 27 26 25
13 14 15 16 17 18 19 20 21 22 23 24
VDD (+5V)
Vss (0V)
Vss (0V)
VDD (+5V)

PIN ASSIGNMENT

PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		○	CCUP	13	○		YSIN	25		○	CO2	37	○	○	CSZ
2		○	CCDP	14		○	YSH	26		○	PINH	38	○		CVCO
3		○	CCPR	15	○		XYRP	27		○	CO1K	39	○		$\overline{\text{TES 6}}$
4		○	CSP	16		○	YCK8	28		○	XCLP	40	○		$\overline{\text{TES 7}}$
5		○	CSUP	17	○		$\overline{\text{TES 2}}$	29		○	RINH	41	○		$\overline{\text{RST}}$
6			Vss	18	○		$\overline{\text{TES 3}}$	30		○	SWA	42		○	CCK8
7	○		$\overline{\text{TES 1}}$	19			VDD	31			Vss	43			VDD
8		○	YCUP	20	○		$\overline{\text{TES 4}}$	32		○	SWB	44	○		XCRP
9		○	YCDP	21	○		YVCO	33		○	SWC	45		○	CSH
10		○	YCPR	22	○	○	YSZ	34		○	CO3	46	○		CSIN
11		○	YSP	23	○		REC/PLAY	35	○		$\overline{\text{TES 5}}$	47		○	CO
12		○	YSUP	24	○		XVD	36		○	CO4	48	○		CI


13 YSIN
46 CSIN
48 CO
47 CI
15 XYRP
21 YVCO
44 XCRP
38 CVCO
23 REC/PLAY
24 XVD
7 TES1
17 TES2
18 TES3
20 TES4
35 TES5
39 TES6
40 TES7
41 RST
YSH 14
CSH 45
YCUP 8
YCDP 9
YCPR 10
YSP 11
YSUP 12
YSZ 22
YCK8 16
CCUP 1
CCDP 2
CCPR 3
CSP 4
CSUP 5
CSZ 37
CCK8 42
CO1 27
CO2 25
CO3 34
CO4 36
SWA 30
SWB 32
SWC 33
PINH 26
RINH 29
XCLP 28

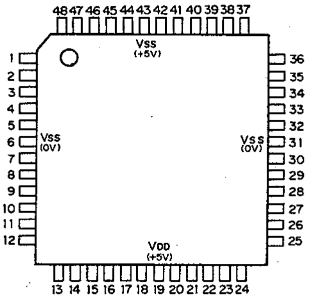
CCDP ; CHROMA CHARGE DOWN PULSE OUT
CCK 8 ; CHROMA VCO 1/8 COUNT DOWN OUT
CCPR ; CHROMA CHARGE PUMP RESET PULSE OUT
CCUP ; CHROMA CHARGE UP PULSE OUT
CI ; CLOCK IN(SELECTED H)
CO ; CLOCK OUT(SELECTED H)
CO 1-4 ; CLOCK OUT(CCD DRIVE)
CSH ; CHROMA SELECTED H OUT
CSIN ; CHROMA HORIZONTAL SYNC IN
CSP ; CHROMA SAMPLING PULSE OUT
CSUP ; CHROMA SPEED UP PULSE OUT
CSZ ; CHROMA SYNC ZERO OUT(PLAYBACK)
CVCO ; CHROMA VCO CLOCK IN
PINH ; PLAY INHIBIT OUT
REC/PLAY ; REC/PLAY SELECT IN
RST ; RESET IN
RINH ; REC INHIBIT OUT
SWA,SWB,SWC ; CCD READ DATA SELECT A, B, C OUT
TES 1-7 ; TEST 1-7 IN
XCLP ; CHROMA CLAMP OUT
XCRP ; CHROMA VCO RESET PULSE IN
XYRP ; Y VCO RESET PULSE
XVD ; VD IN
YCDP ; Y CHARGE DOWN PULSE OUT
YCK8 ; Y VCO 1/8 COUNT DOWN OUT
YCPR ; Y CHARGE PUMP RESET PULSE OUT
YCUP ; Y CHARGE UP PULSE OUT
YSH ; Y SELECTED H OUT
YSIN ; Y HORZONTAL SYNC IN
YSP ; Y SAMPLING PULSE OUT
YSUP ; Y SPEED UP PULSE OUT
YSZ ; Y SYNC ZERO(RECORD)
YVCO ; Y VCO CLOCK IN


YSIN 13
CI 48
CO 47
CSIN 46
YVCO 21
XYRP 15
XCRP 44
CVCO 38
REC/PLAY 23
XVD 24
TES 1 7
TES 2 17
TES 3 18
TES 4 20
TES 5 35
TES 6 39
TES 7 40
REST 41
H SYNC FALLING EDGE DETECTOR
1/672
1/21
H SYNC FALLING EDGE DETECTOR
1/672
1/21
1/2
1/4
9 BIT COUNTER
PHASE DETECTOR AND TIMING GENERATOR
PHASE DETECTOR AND TIMING GENERATOR
9 BIT COUNTER
1/2
1/4
9 BIT COUNTER
MPX
DECODE
MPX
9 BIT COUNTER
ENCODE
OUTPUT CONTROL
TEST
14 YSH
45 CSH
16 YCK8
8 YCUP
9 YCDP
10 YCPR
11 YSP
12 YSUP
22 YSZ
1 CCUP
2 CCDP
3 CCPR
4 CSP
5 CSUP
37 CSZ
42 CCK8
27 CO1
25 CO2
34 CO3
36 CO4
30 SWA
32 SWB
33 SWC
26 PINH
29 RINH
28 XCLP

CX7993A (SONY) FLAT PACKAGE

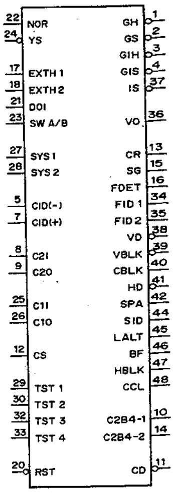
C-MOS TIMING GENERATOR

— TOP VIEW —

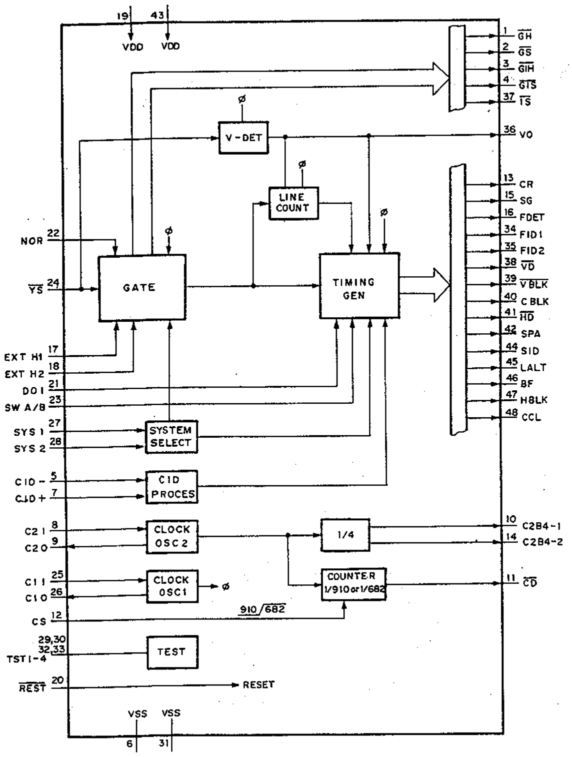

48 47 46 45 44 43 42 41 40 39 38 37
1 2 3 4 5 6 7 8 9 10 11 12
36 35 34 33 32 31 30 29 28 27 26 25
13 14 15 16 17 18 19 20 21 22 23 24
Vss (+5V)
Vss (0V)
Vss (0V)
VDD (+5V)

PIN ASSIGNMENT

PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		○	$\overline{\text{GH}}$	13		○	CR	25	○		C11	37		○	$\overline{\text{TS}}$
2		○	$\overline{\text{GS}}$	14		○	C284-2	26		○	C10	38		○	$\overline{\text{VD}}$
3		○	$\overline{\text{GIH}}$	15		○	SG	27	○		SYS 1	39		○	$\overline{\text{VBLK}}$
4		○	$\overline{\text{GIS}}$	16		○	FDET	28	○		SYS 2	40		○	CBLK
5	○		CID −	17	○		EXTH 1	29			T 1	41		○	$\overline{\text{HD}}$
6			Vss	18	○		EXTH 2	30			T 2	42		○	SPA
7	○		CID +	19			VDD	31			Vss	43			VDD
8	○		C21	20	○		$\overline{\text{RST}}$	32			T3	44		○	SID
9		○	C20	21	○		DOI	33			T4	45		○	LALT
10		○	C284-1	22	○		NOR	34		○	FID 1	46		○	BF
11		○	$\overline{\text{CD}}$	23	○		SW A/B	35		○	FID 2	47		○	H BLK
12	○		CS	24	○		$\overline{\text{YS}}$	36		○	VO	48		○	CCL


22 NOR
24 YS
17 EXTH 1
18 EXTH 2
21 DOI
23 SW A/B
27 SYS 1
28 SYS 2
5 CID(-)
7 CID(+)
8 C21
9 C20
25 C11
26 C10
12 CS
29 TST 1
30 TST 2
32 TST 3
33 TST 4
20 RST
GH 1
GS 2
GIH 3
GIS 4
IS 37
VO 36
CR 13
SG 15
FDET 16
FID 1 34
FID 2 35
VD 38
VBLK 39
CBLK 40
HD 41
SPA 42
SID 44
LALT 45
BF 46
HBLK 47
CCL 48
C2B4-1 10
C2B4-2 14
CD 11

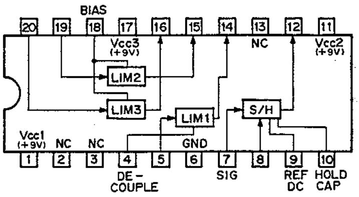
BF	; BURST FLAG OUT
C11	; CLOCK 1 IN
C10	; CLOCK 1 OUT
C2B4-1	; CLOCK 2/4-1
C2B4-2	; CLOCK 2/4-2
C21	; CLOCK 2 IN
C20	; CLOCK 2 OUT
CBLK	; CHROMA BLANKING PULSE OUT
CCL	; CHROMA CLAMP
CD	; COUNT DOWN SIGNAL
CID+,CID-	; CHROMA ID +,- IN
CR	; CORRECT SYNC OUT
CS	; COUNTER SELECT IN
EXTH 1	; EXTERNAL H-1
EXTH 2	; EXTERNAL H-2
FDET	; FRAME DET OUT
FID1 FID2	; FRAME ID 1,2 OUT
GH	; GATED H OUT
GIH	; GATE/INTERPORATED H OUT
GIS	; GATE/INTERPORATED SYNC OUT
GS	; GATED SYNC OUT
HBLK	; H-BLANKING PULSE OUT
HD	; HD OUT
IS	; INTERPORATED SYNC OUT
LALT	; LINE ALTERNATE OUT
NOR	; MODE SELECT(NORMAL/SERCH) IN
RST	; RESET IN
SG	; SYNC GATE OUT
SID	; SECAM ID OUT
SPA	; SECAM PHASE ALTERNATE OUT
SW A/B	; Y SWITCHING PULSE A/B IN
SYS1,SYS2	; SYSTEM SELECT 1,2 IN
TST1,TST2	; TEST 1,TEST 2
VBLK	; V-BLANKING PULSE OUT
VD	; VD OUT
VO	; V OUT
YS	; Y SYNC OUT


19 43
VDD VDD
V-DET
LINE COUNT
GATE
TIMING GEN
SYSTEM SELECT
CID PROCES
CLOCK OSC2
1/4
CLOCK OSC1
COUNTER 1/910 or 1/682
910/682
TEST
RESET
NOR 22
YS 24
EXT H1 17
EXT H2 18
DOI 21
SW A/B 23
SYS 1 27
SYS 2 28
CID - 5
CID + 7
C21 8
C20 9
C11 25
C10 26
CS 12
TST1-4 29,30 32,33
REST 20
1 GH
2 GS
3 GIH
4 GIS
37 IS
36 VO
13 CR
15 SG
16 FDET
34 FID1
35 FID2
38 VD
39 VBLK
40 CBLK
41 HD
42 SPA
44 SID
45 LALT
46 BF
47 HBLK
48 CCL
10 C2B4-1
14 C2B4-2
11 CD
VSS VSS
6 31

CXA1039M (SONY) FLAT PACKAGE

DETAIL ENHANCER LIMITER

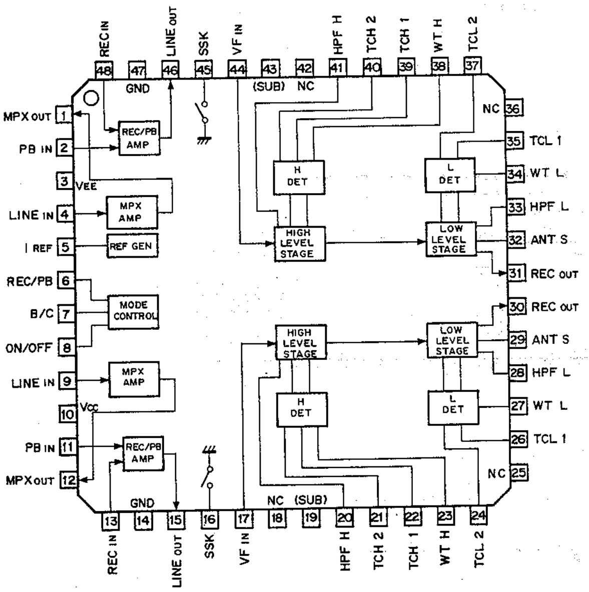
— TOP VIEW —


BIAS
20 19 18 17 16 15 14 13 12 11
Vcc3 (+9V)
NC
Vcc2 (+9V)
LIM2
LIM3
LIM1
S/H
Vcc1 (+9V)
NC NC
GND
1 2 3 4 5 6 7 8 9 10
DE-COUPLE
SIG
REF DC
HOLD CAP

CXA1097Q (SONY) FLAT PACKAGE

DOLBY TYPE-B/C NOISE REDUCTION

— TOP VIEW —


REC IN 48
47 GND
LINE OUT 46
SSK 45
VF IN 44
43 (SUB)
42 NC
HPF H 41
TCH 2 40
TCH 1 39
WT H 38
TCL 2 37
NC 36
MPX OUT 1
PB IN 2
3 VEE
LINE IN 4
I REF 5
REC/PB 6
B/C 7
ON/OFF 8
LINE IN 9
10 Vcc
PB IN 11
MPX OUT 12
REC/PB AMP
MPX AMP
REF GEN
MODE CONTROL
MPX AMP
REC/PB AMP
H DET
L DET
HIGH LEVEL STAGE
LOW LEVEL STAGE
HIGH LEVEL STAGE
LOW LEVEL STAGE
H DET
L DET
35 TCL 1
34 WT L
33 HPF L
32 ANT S
31 REC OUT
30 REC OUT
29 ANT S
28 HPF L
27 WT L
26 TCL 1
NC 25
GND
NC (SUB)
13 REC IN
14
15 LINE OUT
16 SSK
17 VF IN
18
19
20 HPF H
21 TCH 2
22 TCH 1
23 WT H
24 TCL 2

ANT S	; ANTI-SATURATION	TCH 1	; TIME CONSTANT-1 FOR HLS*1
B/C	; DOLBY TYPE-B/-C SELECT	TCH 2	; TIME CONSTANT-2 FOR HLS
HPF H	; HPF FOR HIGH-LEVEL-STAGE	TCL 1	; TIME CONSTANT-1 FOR LLS*2
HPF L	; HPF FOR LOW-LEVEL-STAGE	TCL 2	; TIME CONSTANT-2 FOR LLS
IREF	; REFERENT CURRENT SOURCE	VF IN	; ENCODER INPUT
ON/OFF	; DOLBY NR ON/OFF SELECT	WT H	; WEIGHTING FOR HLS
REC/PB	; REC/PB SELECT	WT L	; WEIGHTING FOR LLS
SSK	; SPECTRAL SKEWING SWITCH		

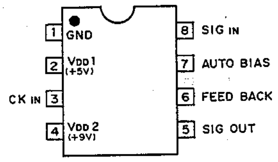
*1: HIGH-LEVEL-STAGE

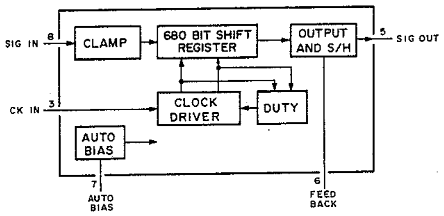
*2: LOW-LEVEL-STAGE

CXL5001M (SONY) FLAT PACKAGE

C-MOS CCD FOR NTSC 1H DELAY LINE

— TOP VIEW —

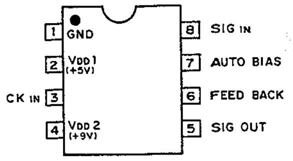

1 GND
2 VDD1 (+5V)
CK IN 3
4 VDD 2 (+9V)
8 SIG IN
7 AUTO BIAS
6 FEED BACK
5 SIG OUT

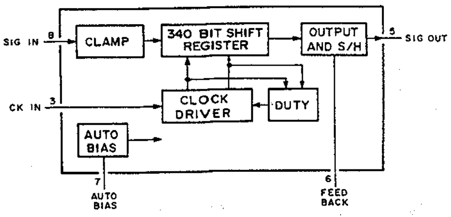

SIG IN 8
CLAMP
680 BIT SHIFT REGISTER
OUTPUT AND S/H
5 SIG OUT
CK IN 3
CLOCK DRIVER
DUTY
AUTO BIAS
7 AUTO BIAS
6 FEED BACK

CXL5002M (SONY) FLAT PACKAGE

C-MOS CCD FOR NTSC 1/2H DELAY LINE

— TOP VIEW —

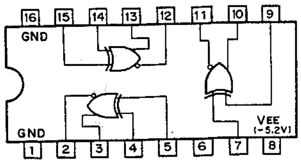

1 GND
2 VDD1 (+5V)
CK IN 3
4 VDD 2 (+9V)
8 SIG IN
7 AUTO BIAS
6 FEED BACK
5 SIG OUT

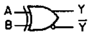

SIG IN 8
CLAMP
340 BIT SHIFT REGISTER
OUTPUT AND S/H
5 SIG OUT
CK IN 3
CLOCK DRIVER
DUTY
AUTO BIAS
7 AUTO BIAS
6 FEED BACK

MC10H107M (MOTOROLA) FLAT PACKAGE

ECL EXCLUSIVE OR/NOR GATE

— TOP VIEW —


16 15 14 13 12 11 10 9
GND
GND
VEE (-5.2V)
1 2 3 4 5 6 7 8



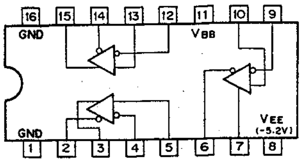
A	B	Y	$\overline{Y}$
0	0	0	1
0	1	1	0
1	0	1	0
1	1	0	1

0; LOW LEVEL
1; HIGH LEVEL

MC10H116M (MOTOROLA) FLAT PACKAGE

ECL DIFFERENTIAL OR/NOR LINE RECEIVER

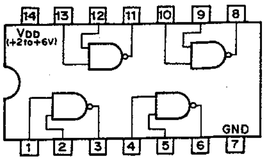
— TOP VIEW —

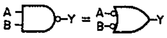

16 15 14 13 12 11 10 9
GND
VBB
GND
VEE (-5.2V)
1 2 3 4 5 6 7 8

MC74HC00F (MOTOROLA) FLAT PACKAGE
TC74HC00F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NAND GATE

— TOP VIEW —


14 13 12 11 10 9 8
VDD (+2to+6V)
GND
1 2 3 4 5 6 7



$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

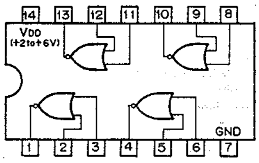
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

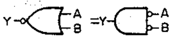
0; LOW LEVEL
1; HIGH LEVEL

MC74HC02F (MOTOROLA) FLAT PACKAGE
TC74HC02F (TOSHIBA) FLAT PACKAGE

C MOS 2-INPUT POSITIVE-NOR GATE

— TOP VIEW —


14 13 12 11 10 9 8
VDD (+2to+6V)
GND
1 2 3 4 5 6 7



$Y = \overline{A + B} = \overline{A} \cdot \overline{B}$

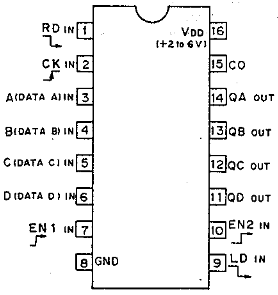
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

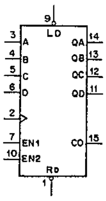
0: LOW LEVEL
1; HIGH LEVEL

MC74HC163F (MOTOROLA) FLAT PACKAGE
TC74HC163F (TOSHIBA) FLAT PACKAGE

C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER

— TOP VIEW —

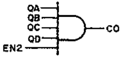

RD IN 1
CK IN 2
A(DATA A) IN 3
B(DATA B) IN 4
C(DATA C) IN 5
D(DATA D) IN 6
EN1 IN 7
8 GND
VDD (+2 to 6V) 16
15 CO
14 QA OUT
13 QB OUT
12 QC OUT
11 QD OUT
10 EN2 IN
9 LD IN


9
LD
3 A
4 B
5 C
6 D
2
7 EN1
10 EN2
RD
1
QA 14
QB 13
QC 12
QD 11
CO 15

MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

CARRY OUTPUT "CO"


QA
QB
QC
QD
EN2
CO

CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15"

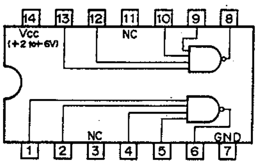
COUNT SEQUENCE

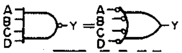
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

MC74HC20F (MOTOROLA) FLAT PACKAGE
TC74HC20F (TOSHIBA) FLAT PACKAGE

C-MOS 4-INPUT POSITIVE-NAND GATE

— TOP VIEW —


14 13 12 11 10 9 8
Vcc (+2 to+6V)
NC
NC
GND
1 2 3 4 5 6 7


A
B
C
D
Y =
A
B
C
D
Y

$Y = \overline{A \cdot B \cdot C \cdot D} = \overline{A} + \overline{B} + \overline{C} + \overline{D}$

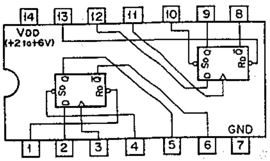
A	B	C	D	Y
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
⋮	⋮	⋮	⋮	⋮
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

0; LOW LEVEL
1; HIGH LEVEL

MC74HC74F (MOTOROLA) FLAT PACKAGE
TC74HC74F (TOSHIBA) FLAT PACKAGE

C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET

— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+2 to+6V)
SD
Q
$\overline{Q}$
RD
D
GND
1
2
3
4
5
6
7

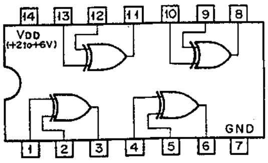
INPUTS				OUTPUTS	
SD	RD	CK	D	Qn+1	$\overline{\text{Qn+1}}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	$\overline{\text{Qn}}$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

MC74HC86F (MOTOROLA) FLAT PACKAGE
TC74HC86F (TOSHIBA) FLAT PACKAGE

C-MOS EXCLUSIVE OR GATE

— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+2to+6V)
GND
1
2
3
4
5
6
7

$Y = \overline{A} \cdot B + A \cdot \overline{B}$

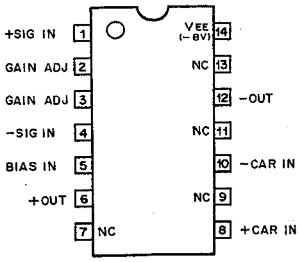
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

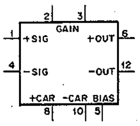
0; LOW LEVEL
1; HIGH LEVEL

NJM1496M (JRC) FLAT PACKAGE

BALANCED MODULATOR/DEMODULATOR

— TOP VIEW —

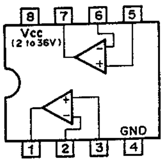

+SIG IN 1
GAIN ADJ 2
GAIN ADJ 3
-SIG IN 4
BIAS IN 5
+OUT 6
7 NC
VEE (-8V) 14
NC 13
12 -OUT
NC 11
10 -CAR IN
NC 9
8 +CAR IN


2
3
GAIN
1
+SIG
+OUT
6
4
-SIG
-OUT
12
+CAR
-CAR
BIAS
8
10
5

NJM2903M (JRC) FLAT PACKAGE
uPC393G2 (NEC) FLAT PACKAGE

VOLTAGE COMPARATOR

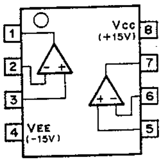
— TOP VIEW —


8
7
6
5
Vcc
(2 to 36V)
GND
1
2
3
4

NJM4560M (JRC) FLAT PACKAGE

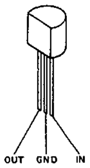
OPERATIONAL AMPLIFIER

— TOP VIEW —

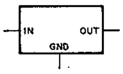

1
2
3
4
VEE
(-15V)
Vcc
(+15V)
8
7
6
5

NJM78L ? ?A (NEC)

POSITIVE VOLTAGE REGULATOR (100mA)



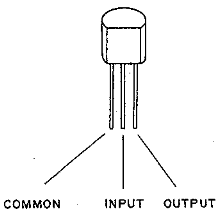
OUTPUT VOLTAGE	NJM78L??A
+2.6V	NJM78L02A
+5V	NJM78L05A



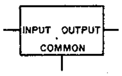
NJM79L ? ?A (JRC)

NEGATIVE VOLTAGE REGULATOR (100mA)

— FRONT VIEW —

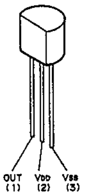

COMMON
INPUT
OUTPUT

OUTPUT VOLTAGE	NJM79L??A
-3V	NJM79L03A

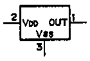

INPUT
OUTPUT
COMMON

S-805 ? ? (SEIKO I AND E)

VOLTAGE DETECTOR


OUT (1)
VDD (2)
VSS (3)

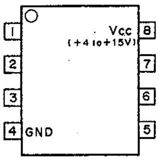
DETECTION RANGE (V)	S-805??
3.10 - 3.40	S-8053 ALR

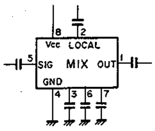

2
VDD
OUT
1
VSS
3

SN16913P (TI)

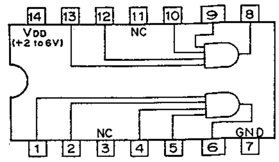
BALANCED MIXER

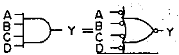
— TOP VIEW —


1
2
3
4
GND
Vcc
(+4 to+15V)
8
7
6
5


8
2
Vcc
LOCAL
5
SIG
MIX
OUT
1
GND
4
3
6
7

SN74HC21NS (TI) FLAT PACKAGE
C-MOS 4-INPUT POSITIVE AND GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+2 to 6V)
NC
NC
GND
1
2
3
4
5
6
7

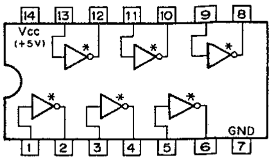

A
B
C
D
Y
A
B
C
D
Y

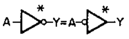
$Y = ABCD = \overline{\overline{A}+\overline{B}+\overline{C}+\overline{D}}$

A	B	C	D	Y
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
⋮	⋮	⋮	⋮	⋮
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

SN74LS06NS (TI) FLAT PACKAGE
TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR
— TOP VIEW —


14
13
12
11
10
9
8
Vcc
(+5V)
GND
1
2
3
4
5
6
7

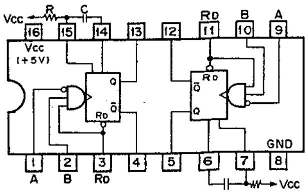


$Y = \overline{A}$

A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
* ; OPEN COLLECTOR

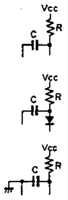
SN74LS123NS (TI) FLAT PACKAGE
TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET
— TOP VIEW —


Vcc
R
C
RD
B
A
16
15
14
13
12
11
10
9
Vcc
(+5V)
Q
Q̄
RD
RD
Q
Q̄
GND
1
2
3
4
5
6
7
8
A
B
RD
C
R
Vcc

INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⎍	⊔
1	↓	1	⎍	⊔
↑	0	1	⎍	⊔

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

OUTPUT PULSE WIDTH


Vcc
C
R
Vcc
C
R
Vcc
C
R

'123 ; $T_W = 0.28\left(1+\frac{700}{R}\right)CR$

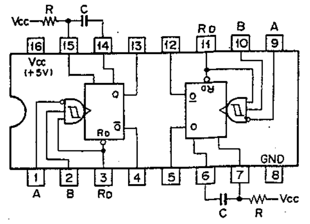
'L123 ; $T_W = 0.33\left(1+\frac{700}{R}\right)CR$

'123 ; $T_W = 0.25\left(1+\frac{700}{R}\right)CR$

'L123 ; $T_W = 0.29\left(1+\frac{700}{R}\right)CR$

'LS123 ; $T_W = 0.45CR$

SN74LS221NS (TI) FLAT PACKAGE
TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

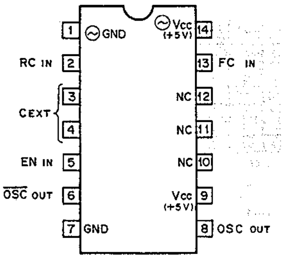

R
C
Vcc
RD
B
A
16
15
14
13
12
11
10
9
Vcc
(+5V)
Q
Q̄
RD
RD
Q
Q̄
GND
1
2
3
4
5
6
7
8
A
B
RD
C
R
Vcc

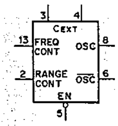
INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⎍	⊔
1	↓	1	⎍	⊔
↑	0	1	⎍	⊔

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

SN74LS624NS (TI) FLAT PACKAGE
TTL VOLTAGE CONTROLLED OSCILLATOR
— TOP VIEW —

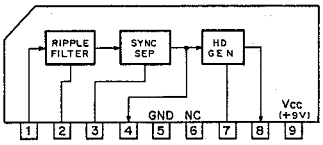

1
GND
Vcc
(+5V)
14
RC IN
2
13
FC IN
CEXT
3
NC
12
4
NC
11
EN IN
5
NC
10
OSC̄ OUT
6
Vcc
(+5V)
9
7
GND
8
OSC OUT


3
4
CEXT
13
FREQ CONT
OSC
8
2
RANGE CONT
OSC̄
6
EN
5

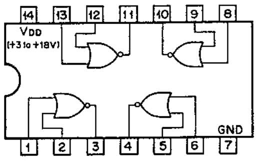
EN	OSC	OSC̄
0	ENABLE	ENABLE
1	0	1

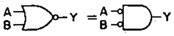
0 ; LOW LEVEL
1 ; HIGH LEVEL

TA7357AP (TOSHIBA)
SYNC SEPARATOR/HD PULSE GENERATOR
— SIDE VIEW —


RIPPLE FILTER
SYNC SEP
HD GEN
GND
NC
Vcc
(+9V)
1
2
3
4
5
6
7
8
9

TC4001BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+3 to +18V)
GND
1
2
3
4
5
6
7

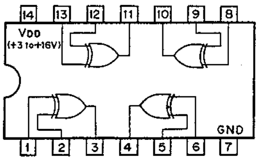


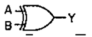
$Y = \overline{A+B} = \overline{A}\cdot\overline{B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4030BFHB (TOSHIBA) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+3 to +16V)
GND
1
2
3
4
5
6
7

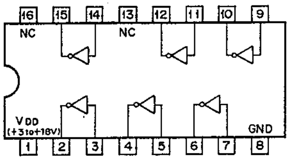


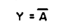
$Y = \overline{A}\cdot B + A\cdot\overline{B}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC4049BF (TOSHIBA) FLAT PACKAGE
C-MOS INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —


16
15
14
13
12
11
10
9
NC
NC
VDD
(+3 to +18V)
GND
1
2
3
4
5
6
7
8

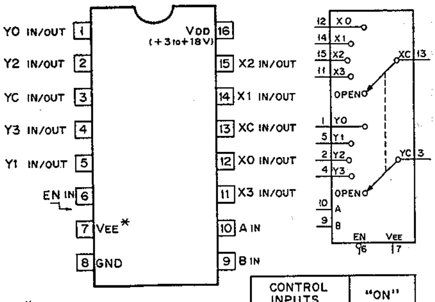


$Y = \overline{A}$

A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4052BFHB (TOSHIBA) FLAT PACKAGE
C-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

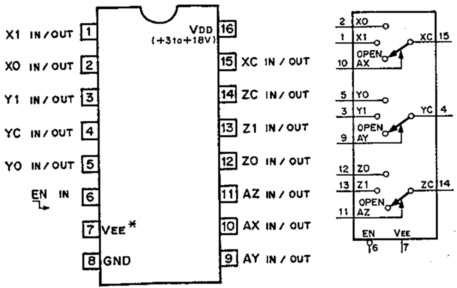

Y0 IN/OUT 1
Y2 IN/OUT 2
YC IN/OUT 3
Y3 IN/OUT 4
Y1 IN/OUT 5
EN IN 6
7 VEE*
8 GND
VDD (+3to+18V) 16
15 X2 IN/OUT
14 X1 IN/OUT
13 XC IN/OUT
12 X0 IN/OUT
11 X3 IN/OUT
10 A IN
9 B IN
X0
X1
X2
X3
OPEN
XC 13
Y0
Y1
Y2
Y3
OPEN
YC 3
A
B
EN 6
VEE 7

VEE*; VDD−VEE= +3 to +18V

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

TC4053BFHB (TOSHIBA) FLAT PACKAGE
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

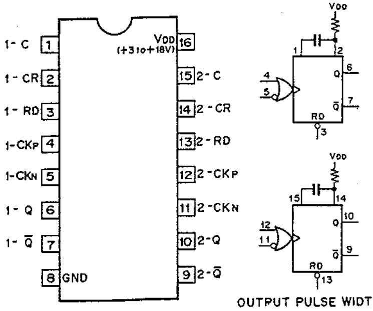

X1 IN/OUT 1
X0 IN/OUT 2
Y1 IN/OUT 3
YC IN/OUT 4
Y0 IN/OUT 5
EN IN 6
7 VEE*
8 GND
VDD (+3to+18V) 16
15 XC IN/OUT
14 ZC IN/OUT
13 Z1 IN/OUT
12 Z0 IN/OUT
11 AZ IN/OUT
10 AX IN/OUT
9 AY IN/OUT
X0
X1
OPEN
AX
XC 15
Y0
Y1
OPEN
AY
YC 4
Z0
Z1
OPEN
AZ
ZC 14
EN 6
VEE 7

VEE*; VDD−VEE= +3 to+18V

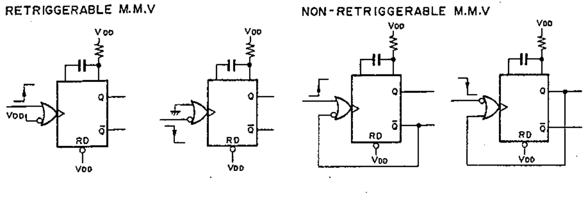
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

CONT. INPUTS		ON CHANNEL
EN	A (X,Y,Z,)	
0	0	0
0	1	1
1	X	OPEN

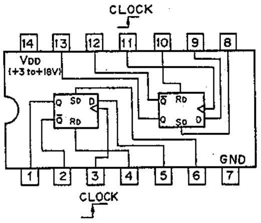
TC4538BF (TOSHIBA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —


1-C 1
1-CR 2
1-RD 3
1-CKP 4
1-CKN 5
1-Q 6
1-Q̄ 7
8 GND
VDD (+3to+18V) 16
15 2-C
14 2-CR
13 2-RD
12 2-CKP
11 2-CKN
10 2-Q
9 2-Q̄
VDD
RD
Q
Q̄

OUTPUT PULSE WIDTH=CR


RETRIGGERABLE M.M.V
NON-RETRIGGERABLE M.M.V
VDD
Q
Q̄
RD

TC504013BF (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —


CLOCK
VDD (+3 to+18V)
Q SD D
Q̄ RD
Q̄ RD
Q SD D
GND
CLOCK

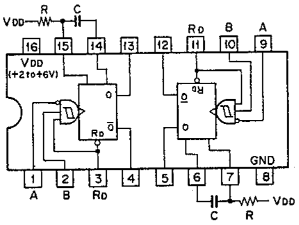
DIRECT R-S FLIP FLOP			
SD	RD	Q	Q̄
0	0	Qn	Q̄n
0	1	0	1
1	0	1	0
1	1	0	1

D-TYPE FLIP FLOP	
CKn	CKn+1
D	Q
0	0
1	1

CLOCK CK; ↑
CKn; BEFORE CLOCK
CKn+1; AFTER CLOCK

0; LOW LEVEL
1; HIGH LEVEL

TC74HC221F (TOSHIBA) FLAT PACKAGE
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

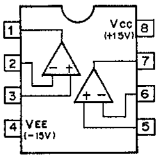

VDD
R
C
RD
B
A
VDD (+2to+6V)
Q
RD
Q̄
GND
A
B
RD
C
R
VDD

INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

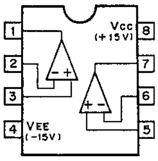
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

OUTPUT PULSE WIDTH=0.7CR

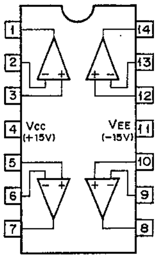
TL072CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(LOW-NOISE, JFET-INPUT)
— TOP VIEW —


1
2
3
4 VEE (−15V)
Vcc (+15V) 8
7
6
5

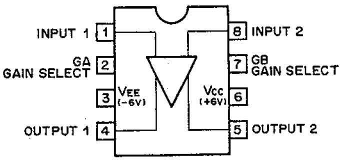
TL082CPS (TI) FLAT PACKAGE
uPC4082G2 (NEC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —


1
2
3
4 VEE (−15V)
Vcc (+15V) 8
7
6
5

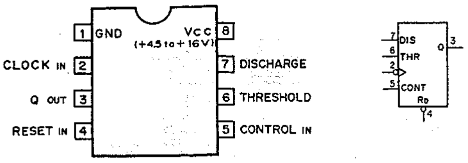
TL084CNS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —


1
2
3
4 Vcc (+15V)
5
6
7
14
13
12
VEE (−15V) 11
10
9
8

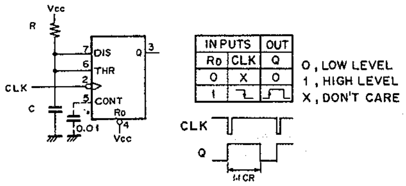
TL592PS (TI) FLAT PACKAGE
DIFFERENTIAL VIDEO AMPLIFIER
— TOP VIEW —


INPUT 1 1
GA GAIN SELECT 2
3 VEE (−6V)
OUTPUT 1 4
8 INPUT 2
7 GB GAIN SELECT
Vcc (+6V) 6
5 OUTPUT 2

uPC1555C (NEC)
PRECISION TIMER
— TOP VIEW —


1 GND
2 CLOCK IN
3 Q OUT
4 RESET IN
8 Vcc (+4.5 to +16V)
7 DISCHARGE
6 THRESHOLD
5 CONTROL IN
7 DIS
6 THR
2
5 CONT
Q 3
RD
4

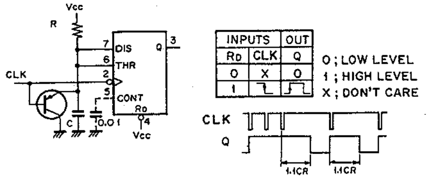
MONOSTABLE MULTIVIBRATOR


Vcc
R
CLK
C
0.01
DIS
THR
CONT
RD
Vcc
CLK
Q
1.1CR

INPUTS		OUT
RD	CLK	Q
0	X	0
1	⎺⎿	⎽⎾⎺⏋

0 , LOW LEVEL
1 , HIGH LEVEL
X , DON'T CARE

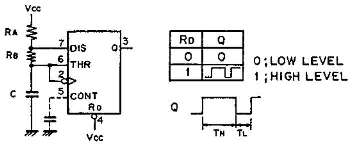
RETRIGGERABLE MONO. MULTIVIBRATOR
(MISSING PULSE DETECTOR)


Vcc
R
CLK
C
0.01
DIS
THR
CONT
RD
Vcc
CLK
Q
1.1CR
1.1CR

INPUTS		OUT
RD	CLK	Q
0	X	0
1	⎺⎿	⎽⎾⎺⏋

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

ASTABLE MULTIVIBRATOR

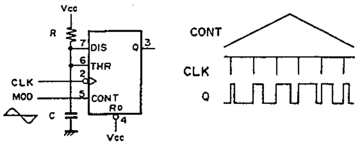

Vcc
RA
RB
C
DIS
THR
CONT
RD
Vcc
Q
TH
TL

RD	Q
0	0
1	⎽⎾⎺⏋⎽⎾⎺⏋

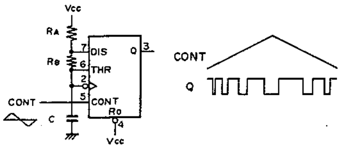
0 ; LOW LEVEL
1 ; HIGH LEVEL

$T_H = 0.693C\ (R_A + R_B)$
$T_L = 0.693C\ R_B$

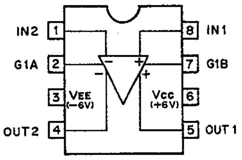
PULSE WIDTH MODULATOR


Vcc
R
CLK
MOD
C
DIS
THR
CONT
RD
Vcc
CONT
CLK
Q

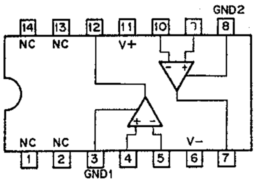
VCO
(PULSE POSITION MODULATOR)


Vcc
RA
RB
CONT
C
DIS
THR
CONT
RD
Vcc
CONT
Q

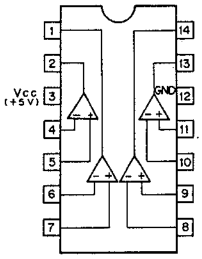
uPC1663G2 (NEC) FLAT PACKAGE
WIDEBAND VIDEO AMPLIFIER
— TOP VIEW —


IN2 1
G1A 2
3 VEE (−6V)
OUT2 4
8 IN1
7 G1B
6 Vcc (+6V)
5 OUT1

uPC319G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —

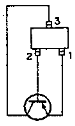

GND2
14 13 12 11 10 9 8
NC NC V+
NC NC V−
1 2 3 4 5 6 7
GND1

uPC339G2 (NEC) FLAT PACKAGE
COMPARATOR
— TOP VIEW —


1 2 3 4 5 6 7
Vcc (+5V)
14 13 12 11 10 9 8
GND

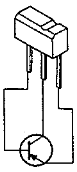
TRANSISTOR

TOP VIEW (SCALE 4/1)



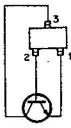
2SA1037K
2SA1162
2SA1179
2SA1226
2SA812

(SCALE 2/1)



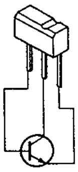
2SB793
2SB822

TOP VIEW (SCALE 4/1)



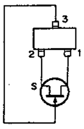
2SC1623
2SC2412K
2SC2712
2SC2714
2SC2715
2SC2812
2SC3052
2SC3326N

(SCALE 2/1)



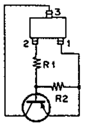
2SD1055
2SD973

TOP VIEW (SCALE 4/1)



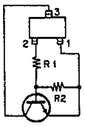
2SK209
2SK94

TOP VIEW (SCALE 4/1)



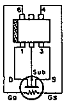
DTA114TK (R1=10K, R2=∞)
DTA114YK (R1=10K, R2=47K)
DTA144TK (R1=47K, R2=∞)

TOP VIEW (SCALE 4/1)

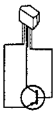


DTC114EK (R1=10K, R2=10K)
DTC114TK (R1=10K, R2=∞)
DTC114YK (R1=10K, R2=47K)
DTC124EK (R1=22K, R2=22K)
DTC143TK (R1=4.7K, R2=∞)
DTC144EK (R1=47K, R2=47K)
DTC144TK (R1=47K, R2=∞)

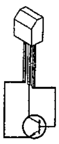
TOP VIEW



TX429M

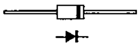


2SA1048



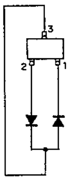
2SD774

DIODE



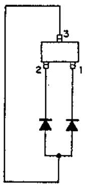
10E-2
1SS119
1SS131
ERA84-009

TOP VIEW (SCALE 4/1)



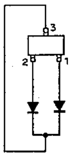
1SS123
DA204K
MA153

TOP VIEW (SCALE 4/1)

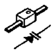


1S2835
DAP202K
MA151WA

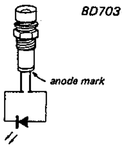
TOP VIEW (SCALE 4/1)



1S2837
DAN202K
MA151WK

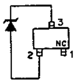


1T33



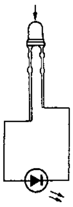
BD703G ; GREEN

TOP VIEW (SCALE 4/1)

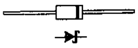


RD ? ?MB?

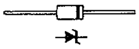
RADIATION SIDE



SLH-34YC3 ; YELLOW



ERC81-004



RD ? ?EB ?

SECTION 7
SCHEMATIC DIAGRAMS

回路図内において、REF. NO の近傍に下記記号が記載されていますが、これは生産時の部品データです。

In the schematic diagrams, the following marks are described nearby reference number. These are parts data at factory.

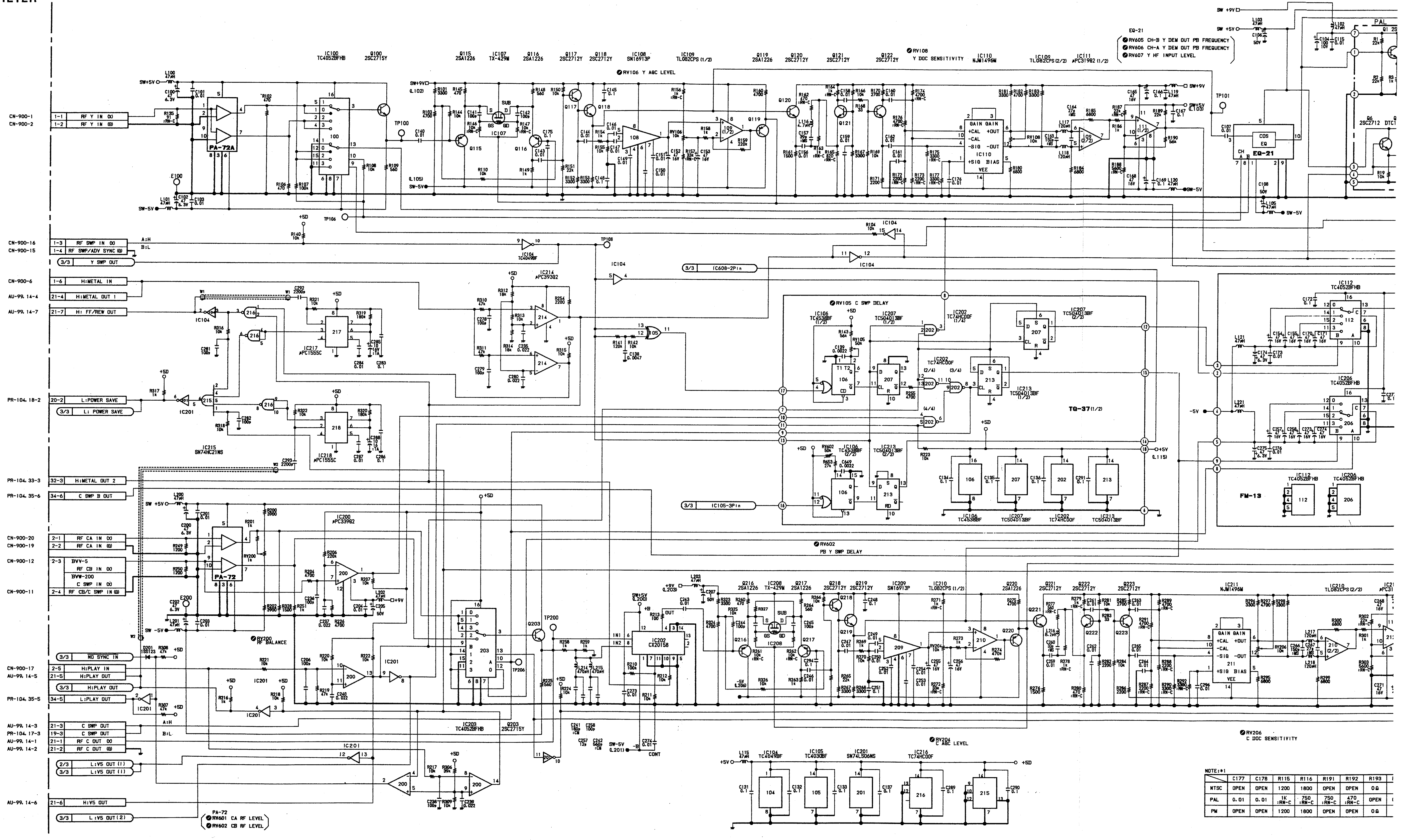
CAPACITOR (C)

AL	ELECTROLYTIC
AS	
TA	TANTALUM
CA	CERAMIC
CC	
CCS	
CM	
CS	
MPS	MYLAR
PP	
PS	
PT	
MD	DIPPED MICA
MS	MICA

RESISTOR (R)
VARIABLE RESISTOR (RV)

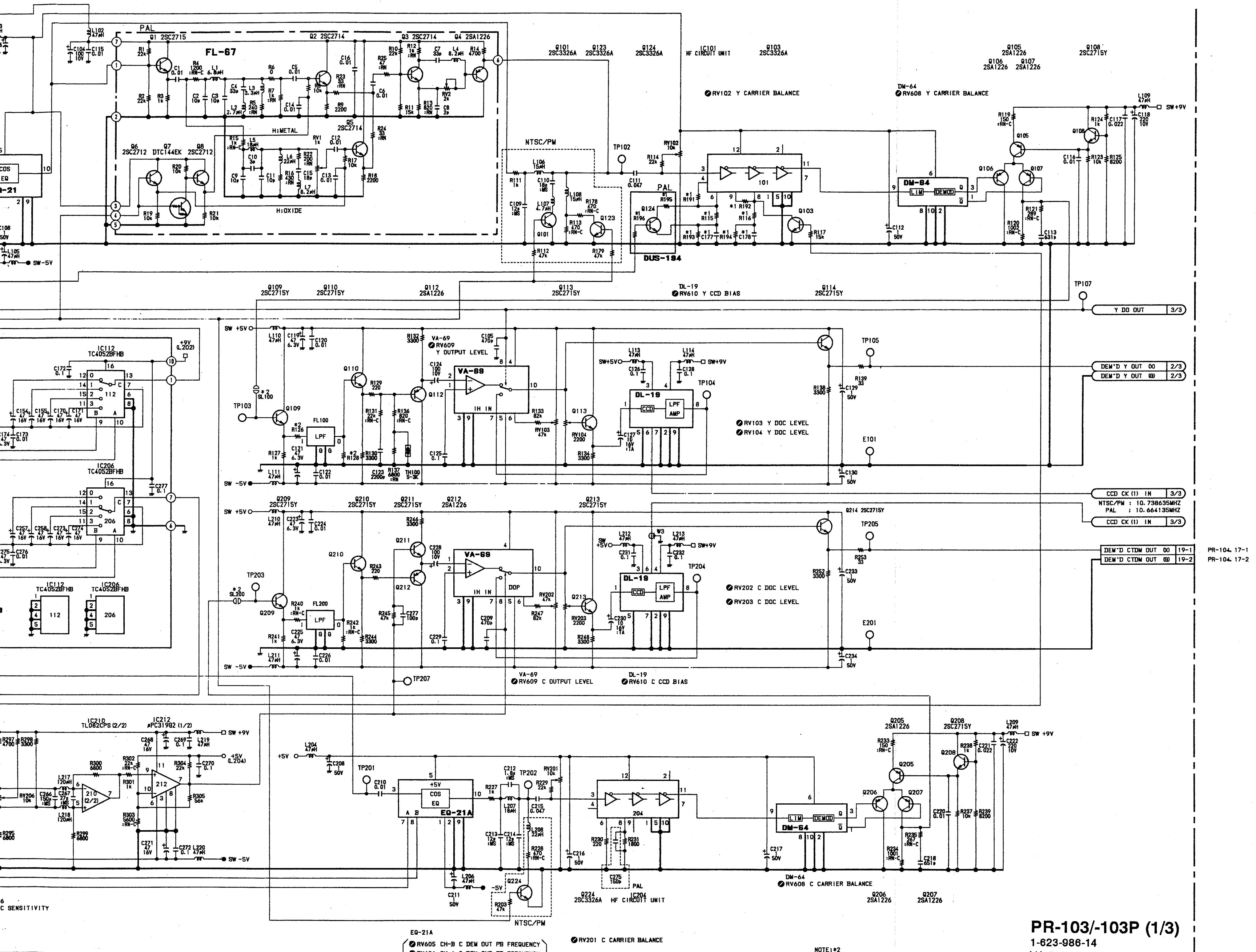
RC	CARBON
RD	
RF	FUSE
RN	METAL
RS	
RW	WIREWOUND

PR-103/-103P (1/3); VIDEO RF DEMODULATOR
DUS-194; SWITCH
FL-67;FILTER


1
2
3
4
5
CN-900-1
CN-900-2
1-1 RF Y IN (X)
1-2 RF Y IN (Y)
PA-72A
IC100 TC4052BFHB
Q100 2SC2715Y
TP100
Q115 2SA1226
IC107 TX-429M
Q116 2SA1226
Q117 2SC2712Y
Q118 2SC2712Y
IC108 SN16913P
IC109 TL082CPS (1/2)
RV106 Y AGC LEVEL
Q119 2SA1226
Q120 2SC2712Y
Q121 2SC2712Y
Q122 2SC2712Y
RV108 Y DOC SENSITIVITY
IC110 NJM1496M
IC109 TL082CPS (2/2)
IC111 μPC31982 (1/2)
EQ-21
RV605 CH-B Y DEM OUT PB FREQUENCY
RV606 CH-A Y DEM OUT PB FREQUENCY
RV607 Y HF INPUT LEVEL
SW +9V
SW +5V
SW-5V
TP101
COS EQ
EQ-21
PAL
TP106
CN-900-16
CN-900-15
1-3 RF SWP IN (X)
1-4 RF SWP/ADV SYNC (Y)
3/3 Y SWP OUT
A:H
B:L
TP108
IC104
3/3 IC608-2Pin
CN-900-6
AU-99, 14-4
AU-99, 14-7
1-6 H:METAL IN
21-4 H:METAL OUT 1
21-7 H: FF/REW OUT
IC214 μPC39302
IC217 μPC1555C
RV105 C SWP DELAY
IC106 TC4538BF
IC207 TC5040138F
IC202 TC74HC00F
IC213 TC5040138F
TG-37 (1/2)
IC112 TC4052BFHB
IC206 TC4052BFHB
FM-13
PR-104, 18-2
20-2 L:POWER SAVE
3/3 L: POWER SAVE
IC215 SN74HC21NS
IC218 μPC1555C
PR-104, 33-3
PR-104, 35-6
32-3 H:METAL OUT 2
34-6 C SWP B OUT
3/3 IC105-3Pin
CN-900-20
CN-900-19
CN-900-12
CN-900-11
2-1 RF CA IN (X)
2-2 RF CA IN (Y)
2-3 BVV-5 RF CB IN (X)
BVW-200 C SWP IN (X)
2-4 RF CB/C SWP IN (Y)
PA-72
IC200 μPC33982
RV602 PB Y SWP DELAY
RV200 RF BALANCE
IC203 TC4052BFHB
Q203 2SC2715Y
TP200
TP206
IC202 CX20158
Q216 2SA1226
IC208 TX-429M
Q217 2SA1226
Q218 2SC2712Y
Q219 2SC2712Y
IC209 SN16913P
IC210 TL082CPS (1/2)
Q220 2SA1226
Q221 2SC2712Y
Q222 2SC2712Y
Q223 2SC2712Y
IC211 NJM1496M
IC210 TL082CPS (2/2)
RV204 C AGC LEVEL
RV206 C DOC SENSITIVITY
3/3 NO SYNC IN
CN-900-17
AU-99, 14-5
2-5 H:PLAY IN
21-5 H:PLAY OUT
3/3 H:PLAY OUT
PR-104, 35-5
34-5 L:PLAY OUT
IC201
AU-99, 14-3
PR-104, 17-3
AU-99, 14-1
AU-99, 14-2
21-3 C SWP OUT
19-3 C SWP OUT
21-1 RF C OUT (X)
21-2 RF C OUT (Y)
2/3 L:V5 OUT (1)
3/3 L:V5 OUT (1)
AU-99, 14-6
21-6 H:V5 OUT
3/3 L:V5 OUT (2)
PA-72
RV601 CA RF LEVEL
RV602 CB RF LEVEL
IC104 TC4049BF
IC105 TC4030BF
IC201 SN74LS06NS
IC216 TC74HC00F
IC215

NOTE;*1

	C177	C178	R115	R116	R191	R192	R193
NTSC	OPEN	OPEN	1200	1800	OPEN	OPEN	0Ω
PAL	0.01	0.01	1K :RN-C	750 :RN-C	750 :RN-C	470 :RN-C	OPEN
PM	OPEN	OPEN	1200	1800	OPEN	OPEN	0Ω


FL-67
PAL
Q1 2SC2715
Q2 2SC2714
Q3 2SC2714
Q4 2SA1226
Q5 2SC2714
Q6 2SC2712
Q7 DTC144EK
Q8 2SC2712
H:METAL
H:OXIDE
NTSC/PM
PAL
DUS-194
Q101 2SC3326A
Q123 2SC3326A
Q124 2SC3326A
IC101 HF CIRCUIT UNIT
Q103 2SC3326A
Q105 2SA1226
Q106 2SA1226
Q107 2SA1226
Q108 2SC2715Y
RV102 Y CARRIER BALANCE
DM-64
RV608 Y CARRIER BALANCE
DM-64
LIM
DEMOD
SW +9V
TP102
TP107
Y DO OUT 3/3
Q109 2SC2715Y
Q110 2SC2715Y
Q112 2SA1226
Q113 2SC2715Y
DL-19
RV610 Y CCD BIAS
Q114 2SC2715Y
IC112 TC4052BFHB
IC206 TC4052BFHB
VA-69
RV609 Y OUTPUT LEVEL
VA-69
DL-19
CCD
LPF AMP
FL100
LPF
TP103
TP104
TP105
E101
RV103 Y DOC LEVEL
RV104 Y DOC LEVEL
DEM'D Y OUT 00 2/3
DEM'D Y OUT 69 2/3
CCD CK (1) IN 3/3
NTSC/PM : 10.738635MHZ
PAL : 10.664135MHZ
CCD CK (1) IN 3/3
DEM'D CTDM OUT 00 19-1
DEM'D CTDM OUT 69 19-2
PR-104, 17-1
PR-104, 17-2
SW +5V
SW -5V
Q209 2SC2715Y
Q210 2SC2715Y
Q211 2SC2715Y
Q212 2SA1226
Q213 2SC2715Y
Q214 2SC2715Y
TP203
TP204
TP205
E201
FL200
DOP
RV202 C DOC LEVEL
RV203 C DOC LEVEL
TP207
VA-69
RV609 C OUTPUT LEVEL
DL-19
RV610 C CCD BIAS
IC210 TL082CPS (2/2)
IC212 μPC3198 (1/2)
TP201
TP202
EQ-21A
COS EQ
Q224 2SC3326A
IC204 HF CIRCUIT UNIT
NTSC/PM
Q205 2SA1226
Q208 2SC2715Y
DM-64
DM-64
RV608 C CARRIER BALANCE
Q206 2SA1226
Q207 2SA1226
C SENSITIVITY

EQ-21A
RV605 CH-B C DEM OUT PB FREQUENCY
RV606 CH-A C DEM OUT PB FREQUENCY
RV607 C HF INPUT LEVEL

RV201 C CARRIER BALANCE

178	R115	R116	R191	R192	R193	R194	R195	R196
PEN	1200	1800	OPEN	OPEN	0Ω	0Ω	OPEN	OPEN
.01	1K :RN-C	750 :RN-C	750 :RN-C	470 :RN-C	OPEN	OPEN	1K RN-C	47K
PEN	1200	1800	OPEN	OPEN	0Ω	0Ω	OPEN	OPEN

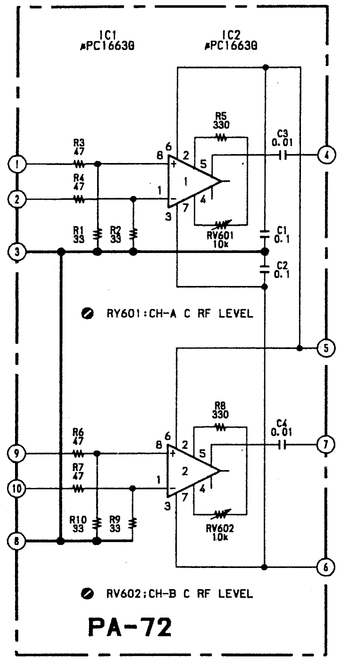
NOTE;*2

	R126	R128	SL100	SL200
NTSC	470 :RN-C	470 :RN-C	SHORT	SHORT
PAL	300 :RN-C	300 :RN-C	SHORT	SHORT
PM	470 :RN-C	470 :RN-C	SHORT	SHORT

PR-103/-103P (1/3)

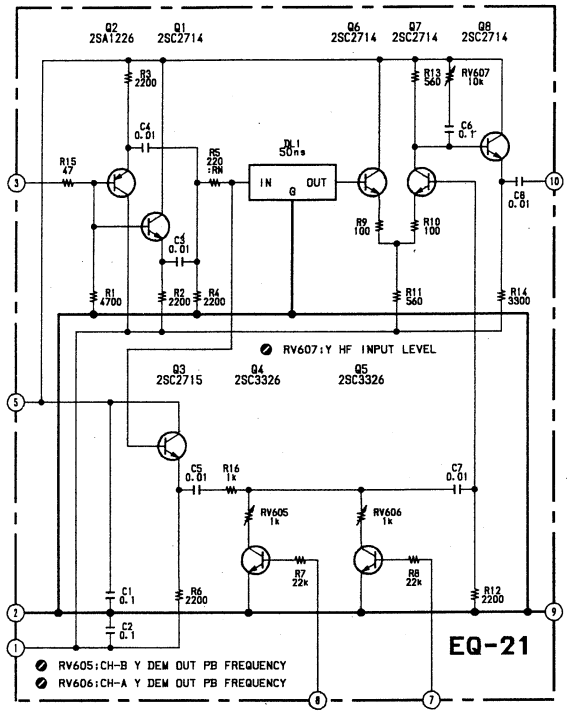
1-623-986-14
VA-500
VA-500P
VA-500PM

PA-72; RF AMP


IC1 μPC1663G
IC2 μPC1663G
R3 47
R4 47
R1 33
R2 33
R5 330
C3 0.01
C1 0.1
C2 0.1
RV601 10k
R6 47
R7 47
R10 33
R9 33
R8 330
C4 0.01
RV602 10k
RV601:CH-A C RF LEVEL
RV602:CH-B C RF LEVEL
PA-72

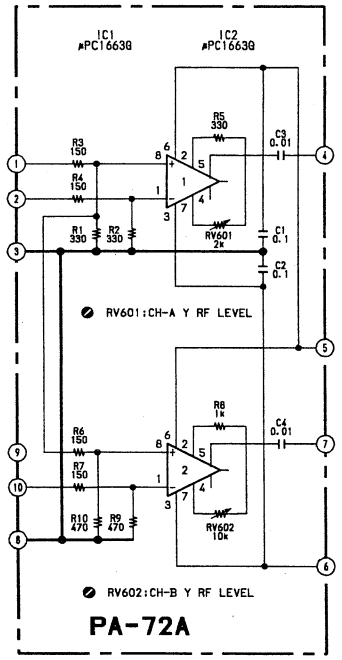
PA-72
1-623-998-11 (1)
VA-500
VA-500P

EQ-21; PHASE EQUALIZER


Q2 2SA1226
Q1 2SC2714
Q6 2SC2714
Q7 2SC2714
Q8 2SC2714
DL1 50ns
IN OUT G
Q3 2SC2715
Q4 2SC3326
Q5 2SC3326
RV607:Y HF INPUT LEVEL
RV605:CH-B Y DEM OUT PB FREQUENCY
RV606:CH-A Y DEM OUT PB FREQUENCY
EQ-21

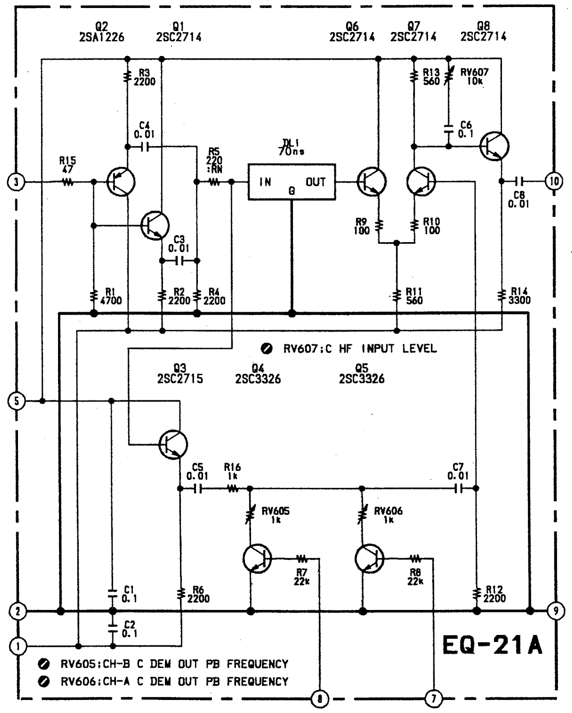
EQ-21
1-623-997-12 (2)
VA-500
VA-500P

PA-72A; RF AMP


IC1 μPC1663G
IC2 μPC1663G
R3 150
R4 150
R1 330
R2 330
R5 330
C3 0.01
RV601 2k
R6 150
R7 150
R10 470
R9 470
R8 1k
C4 0.01
RV602 10k
RV601:CH-A Y RF LEVEL
RV602:CH-B Y RF LEVEL
PA-72A

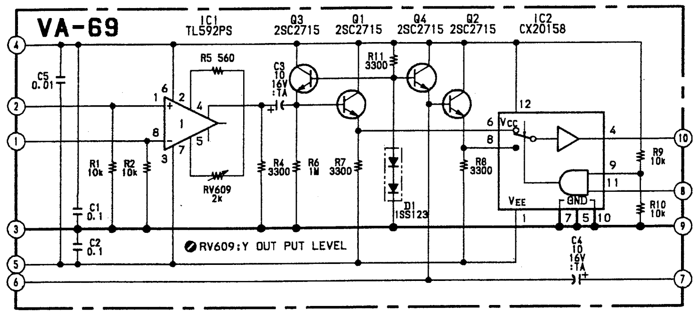
PA-72A
1-623-998-22 (2)
VA-500
VA-500P

EQ-21A; PHASE EQUALIZER


Q2 2SA1226
Q1 2SC2714
Q6 2SC2714
Q7 2SC2714
Q8 2SC2714
DL1 70ns
IN OUT G
Q3 2SC2715
Q4 2SC3326
Q5 2SC3326
RV607:C HF INPUT LEVEL
RV605:CH-B C DEM OUT PB FREQUENCY
RV606:CH-A C DEM OUT PB FREQUENCY
EQ-21A

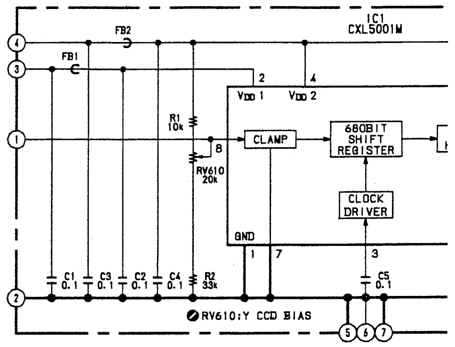
EQ-21A
1-623-997-22 (2)
VA-500
VA-500P

VA-69; VIDEO AMP AND SWITCHER

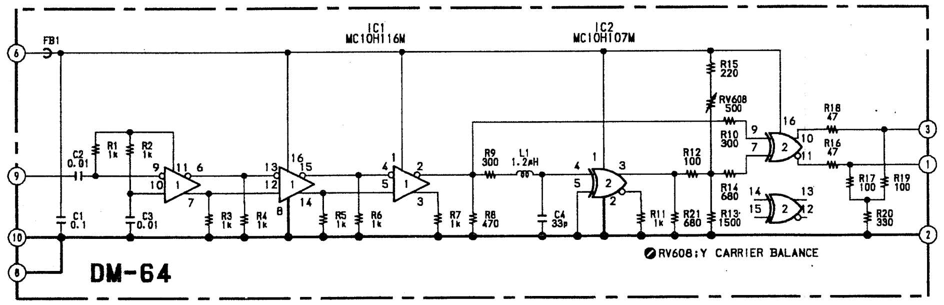

VA-69
IC1 TL592PS
Q3 2SC2715
Q1 2SC2715
Q4 2SC2715
Q2 2SC2715
IC2 CX20158
D1 1SS123
RV609:Y OUT PUT LEVEL

VA-69
1-623-999-11 (1)
VA-500
VA-500P

DL-19; CCD 1H DELAY LINE


IC1 CXL5001M
FB1
FB2
CLAMP
680BIT SHIFT REGISTER
CLOCK DRIVER
RV610:Y CCD BIAS

DM-64; LIMITER

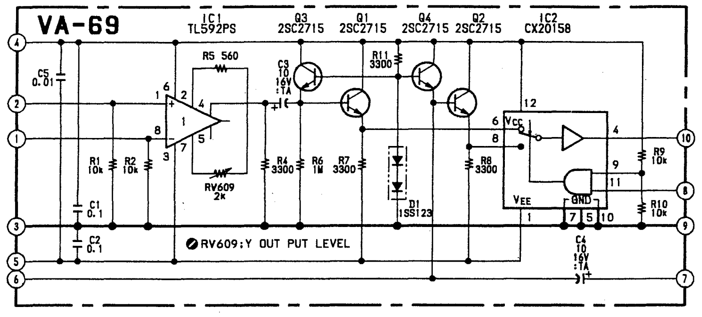

IC1 MC10H116M
IC2 MC10H107M
FB1
L1 1.2μH
RV608:Y CARRIER BALANCE
DM-64

DM-64
1-623-996-11 (2)
VA-500
VA-500P

1 2 3 4 5

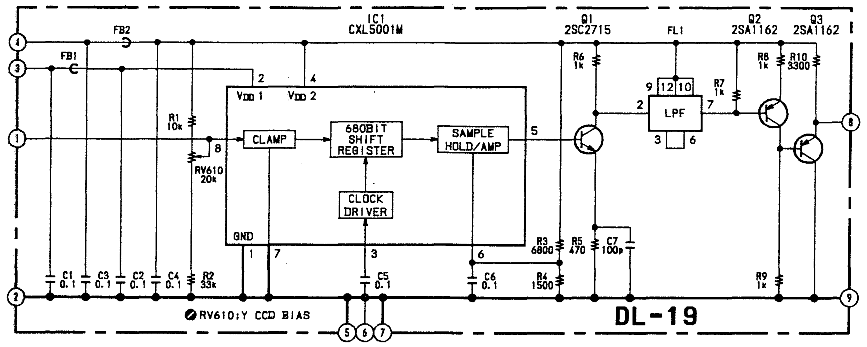
A B C D E F G H

VA-69; VIDEO AMP AND SWITCHER


VA-69
IC1 TL592PS
Q3 2SC2715
Q1 2SC2715
Q4 2SC2715
Q2 2SC2715
IC2 CX20158
C5 0.01
R1 10k
R2 10k
C1 0.1
C2 0.1
R5 560
RV609 2k
C3 10 16V :TA
R4 3300
R6 1M
R7 3300
R11 3300
D1 1SS123
R8 3300
Vcc
VEE
GND
R9 10k
R10 10k
C4 10 16V :TA
RV609:Y OUT PUT LEVEL

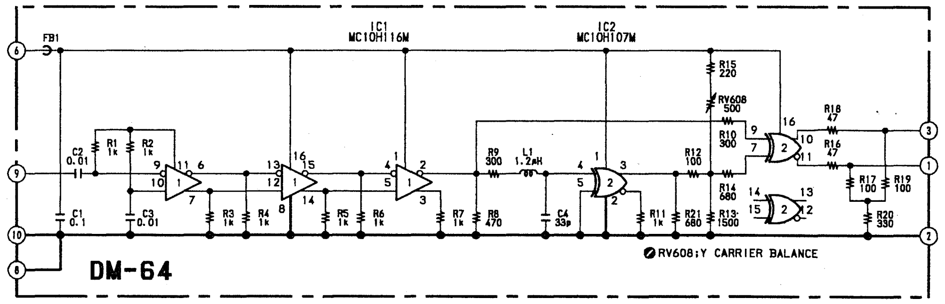
VA-69
1-623-999-11 (1)
VA-500
VA-500P

DL-19; CCD 1H DELAY LINE


FB1
FB2
IC1 CXL5001M
Q1 2SC2715
FL1
Q2 2SA1162
Q3 2SA1162
VDD 1
VDD 2
R1 10k
RV610 20k
CLAMP
680BIT SHIFT REGISTER
SAMPLE HOLD/AMP
CLOCK DRIVER
GND
LPF
R6 1k
R7 1k
R8 1k
R10 3300
R3 6800
R4 1500
R5 470
C7 100p
R9 1k
C1 0.1
C3 0.1
C2 0.1
C4 0.1
R2 33k
C5 0.1
C6 0.1
RV610:Y CCD BIAS
DL-19

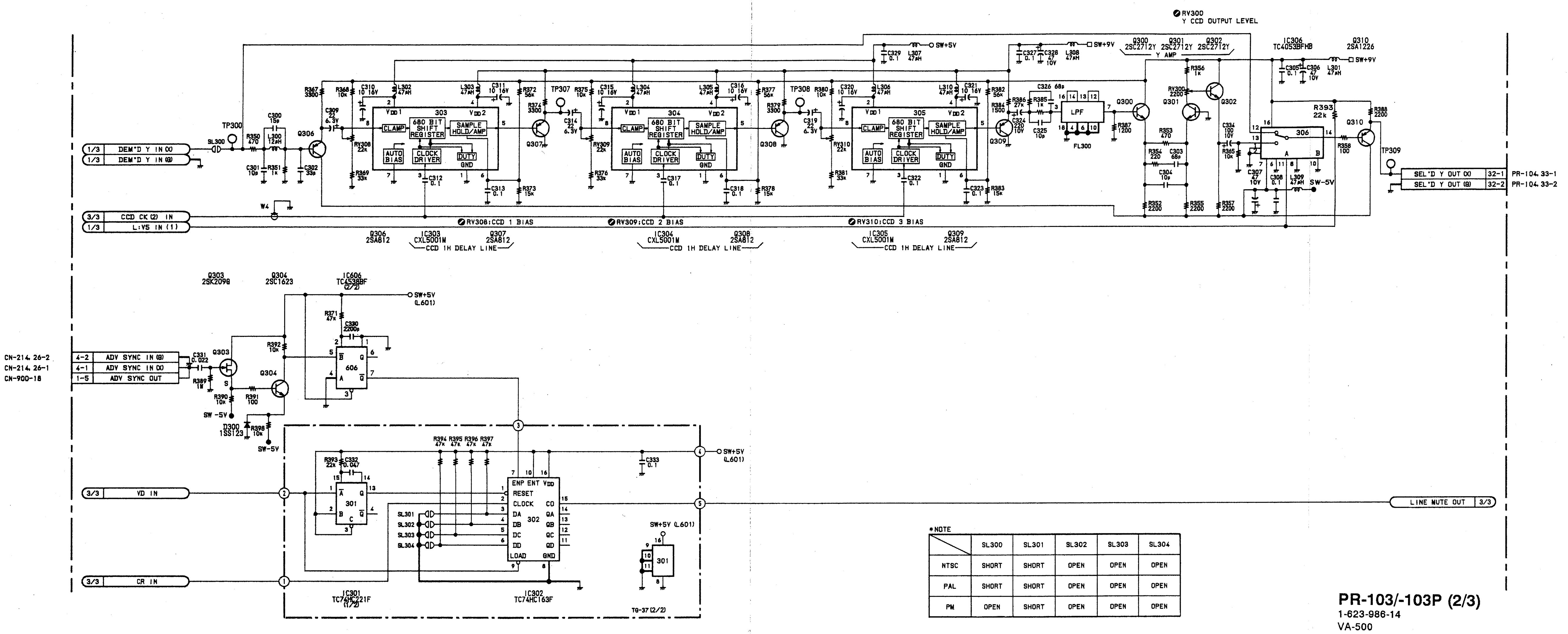
DL-19
1-623-995-12 (2)
VA-500
VA-500P

DM-64; LIMITER


FB1
IC1 MC10H116M
IC2 MC10H107M
C2 0.01
R1 1k
R2 1k
C1 0.1
C3 0.01
R3 1k
R4 1k
R5 1k
R6 1k
R7 1k
R8 470
R9 300
L1 1.2μH
C4 33p
R11 1k
R21 680
R12 100
R15 220
RV608 500
R10 300
R14 680
R13 1500
R18 47
R16 47
R17 100
R19 100
R20 330
RV608:Y CARRIER BALANCE
DM-64

DM-64
1-623-996-11 (2)
VA-500
VA-500P

PR-103/-103P(2/3); VIDEO RF DEMODULATOR

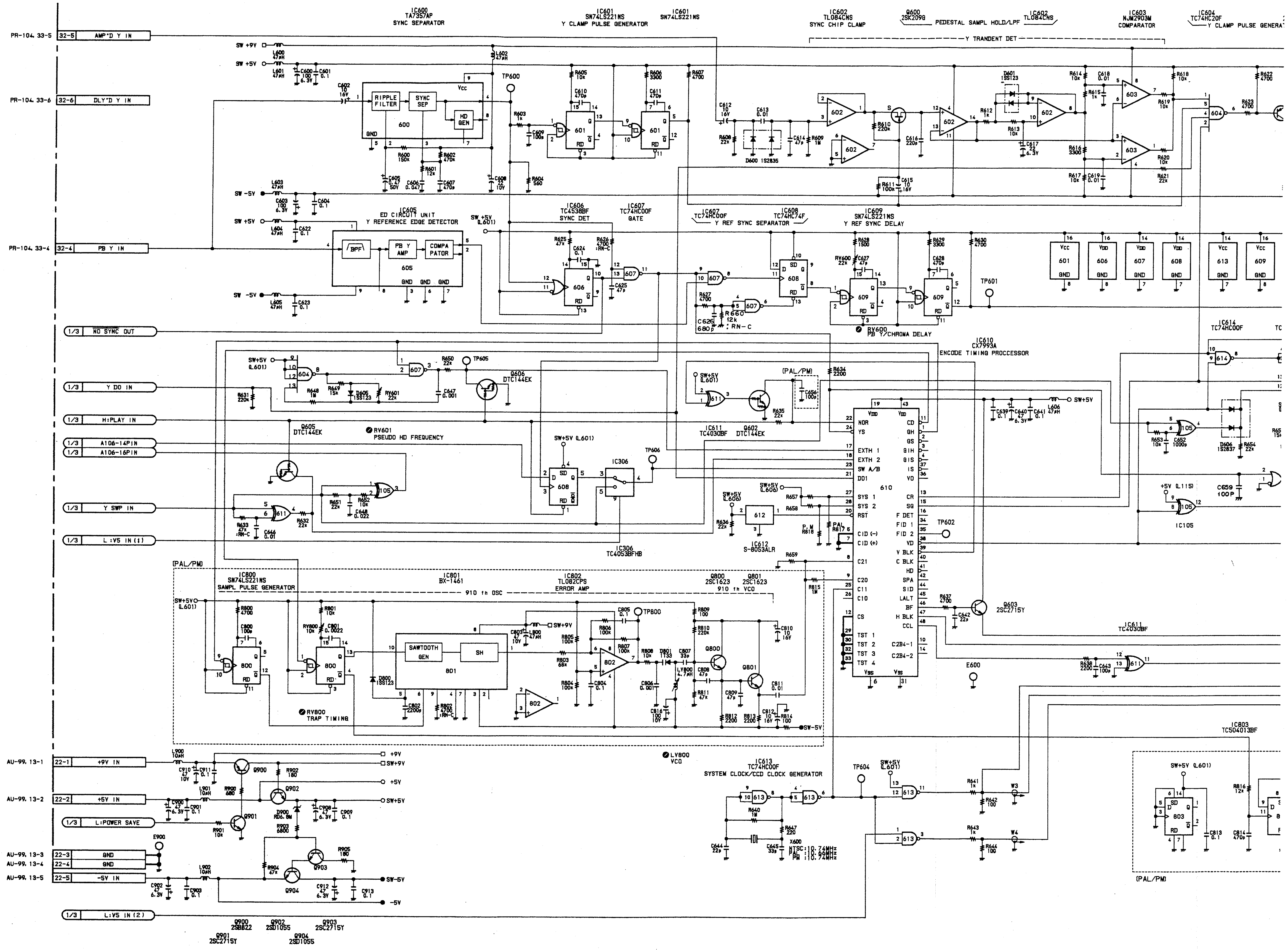

1/3 DEM'D Y IN (X)
1/3 DEM'D Y IN (G)
3/3 CCD CK (2) IN
1/3 L:VS IN (1)
SL300
TP300
TP307
TP308
TP309
W4
R350 470
L300 12μH
C300 15p
C301 10p
R351 1k
C302 33p
Q306
Q307
Q308
Q309
Q310
VDD1
VDD2
303
304
305
306
CLAMP
680 BIT SHIFT REGISTER
SAMPLE HOLD/AMP
AUTO BIAS
CLOCK DRIVER
DUTY
GND
RV308:CCD 1 BIAS
RV309:CCD 2 BIAS
RV310:CCD 3 BIAS
Q306 2SA812
IC303 CXL5001M
Q307 2SA812
CCD 1H DELAY LINE
IC304 CXL5001M
Q308 2SA812
IC305 CXL5001M
Q309 2SA812
SW+5V
SW+9V
SW-5V
LPF
FL300
RV300 Y CCD OUTPUT LEVEL
Q300 2SC2712Y
Q301 2SC2712Y
Q302 2SC2712Y
Y AMP
IC306 TC4053BFHB
Q310 2SA1226
R393 22k
SEL'D Y OUT (X) 32-1 PR-104, 33-1
SEL'D Y OUT (G) 32-2 PR-104, 33-2
Q303 2SK2098
Q304 2SC1623
IC606 TC4538BF (2/2)
SW+5V (L601)
CN-214, 26-2 4-2 ADV SYNC IN (G)
CN-214, 26-1 4-1 ADV SYNC IN (X)
CN-900-18 1-5 ADV SYNC OUT
D300 1SS123
606
3/3 VD IN
3/3 CR IN
301
302
ENP ENT VDD
RESET
CLOCK
DA
DB
DC
DD
LOAD
GND
CO
QA
QB
QC
QD
SL301
SL302
SL303
SL304
R394 47k R395 47k R396 47k R397 47k
C333 0.1
LINE MUTE OUT 3/3
IC301 TC74HC221F (1/2)
IC302 TC74HC163F
TG-37 (2/2)

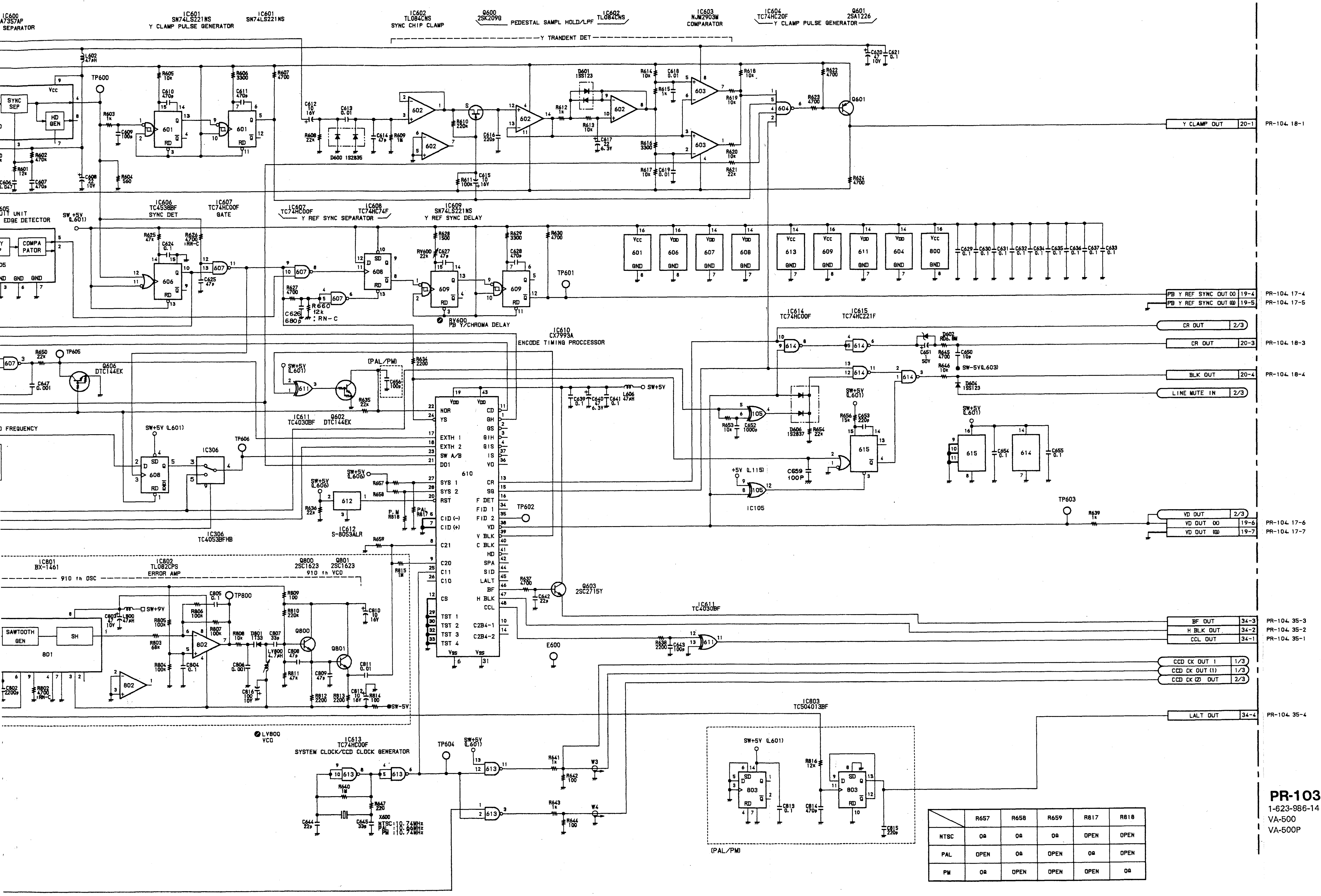
*NOTE

	SL300	SL301	SL302	SL303	SL304
NTSC	SHORT	SHORT	OPEN	OPEN	OPEN
PAL	SHORT	SHORT	OPEN	OPEN	OPEN
PM	OPEN	SHORT	OPEN	OPEN	OPEN

PR-103/-103P (2/3)
1-623-986-14
VA-500
VA-500P
VA-500PM

PR-103/-103P(3/3); VIDEO RF DEMODULATOR

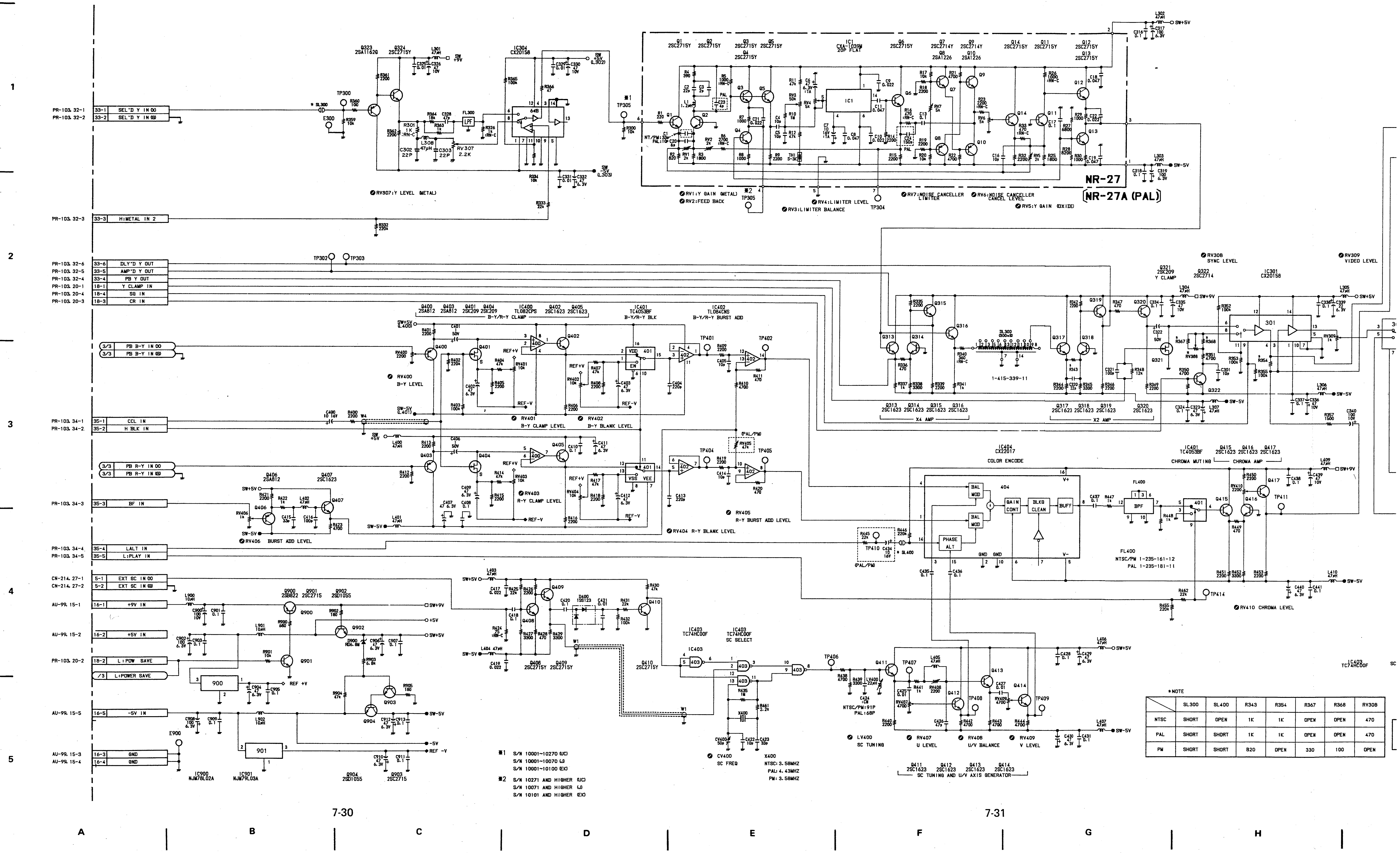

IC600 TA7357AP SYNC SEPARATOR
IC601 SN74LS221NS Y CLAMP PULSE GENERATOR
IC601 SN74LS221NS
IC602 TL084CNS SYNC CHIP CLAMP
Q600 2SK2090
PEDESTAL SAMPL HOLD/LPF
IC602 TL084CNS
Y TRANDENT DET
IC603 NJM2903M COMPARATOR
IC604 TC74HC20F Y CLAMP PULSE GENERA
PR-104, 33-5
32-5 AMP'D Y IN
PR-104, 33-6
32-6 DLY'D Y IN
PR-104, 33-4
32-4 PB Y IN
SW +9V
SW +5V
SW -5V
RIPPLE FILTER
SYNC SEP
HD GEN
Vcc
GND
TP600
D600 1S2835
D601 1SS123
IC605 ED CIRCUIT UNIT Y REFERENCE EDGE DETECTOR
BPF
PB Y AMP
COMPA PATOR
IC606 TC4538BF SYNC DET
IC607 TC74HC00F GATE
IC607 TC74HC00F
IC608 TC74HC74F Y REF SYNC SEPARATOR
IC609 SN74LS221NS Y REF SYNC DELAY
TP601
RV600 PB Y/CHROMA DELAY
1/3 HD SYNC OUT
1/3 Y DO IN
1/3 H:PLAY IN
1/3 A106-14PIN
1/3 A106-16PIN
1/3 Y SWP IN
1/3 L:VS IN (1)
TP605
Q606 DTC144EK
Q605 DTC144EK
RV601 PSEUDO HD FREQUENCY
D605 1SS123
SW+5V (L601)
TP606
IC306
IC306 TC4053BFHB
(PAL/PM)
IC611 TC4030BF
Q602 DTC144EK
IC610 CX7993A ENCODE TIMING PROCCESSOR
NOR
YS
EXTH 1
EXTH 2
SW A/B
DDI
SYS 1
SYS 2
RST
C21
C20
C11
C10
CS
TST 1
TST 2
TST 3
TST 4
CD
GH
GS
SIH
SIS
IS
VO
CR
SG
F DET
FID 1
FID 2
VD
Y BLK
C BLK
HD
SPA
SID
LALT
BF
H BLK
CCL
C2B4-1
C2B4-2
VDD
VSS
CID (-)
CID (+)
IC612 S-8053ALR
TP602
Q603 2SC2715Y
IC611 TC4030BF
E600
IC614 TC74HC00F
IC105
D606 1S2837
C659 100P
+5V (L115)
IC800 SN74LS221NS SAMPL PULSE GENERATOR
IC801 BX-1461
910 fH OSC
IC802 TL082CPS ERROR AMP
Q800 2SC1623
Q801 2SC1623
910 fH VCO
SAWTOOTH GEN
SH
D800 1SS123
RV800 TRAP TIMING
TP800
D801 1T33
LV800 VCO
SW+9V
SW-5V
AU-99, 13-1
22-1 +9V IN
AU-99, 13-2
22-2 +5V IN
1/3 L:POWER SAVE
E900
AU-99, 13-3
22-3 GND
AU-99, 13-4
22-4 GND
AU-99, 13-5
22-5 -5V IN
1/3 L:VS IN (2)
+9V
SW+9V
+5V
SW+5V
SW-5V
-5V
D900 RD6.8M
Q900 2SB822
Q901 2SC2715Y
Q902 2SD1055
Q903 2SC2715Y
Q904 2SD1055
IC613 TC74HC00F SYSTEM CLOCK/CCD CLOCK GENERATOR
TP604
X600 NTSC:10.74MHz PAL:10.60MHz PM:10.74MHz
W3
W4
IC803 TC4013BF
(PAL/PM)


IC600
A7357AP
SEPARATOR
IC601
SN74LS221NS
Y CLAMP PULSE GENERATOR
IC601
SN74LS221NS
IC602
TL084CNS
SYNC CHIP CLAMP
Q600
2SK2098
PEDESTAL SAMPL HOLD/LPF
IC602
TL084CNS
IC603
NJM2903M
COMPARATOR
IC604
TC74HC20F
Y CLAMP PULSE GENERATOR
Q601
2SA1226
Y TRANDENT DET
SYNC SEP
HD GEN
TP600
D601
1SS123
D600 1S2835
IC606
TC4538BF
SYNC DET
IC607
TC74HC00F
GATE
EDGE DETECTOR
COMPA RATOR
IC607
TC74HC00F
IC608
TC74HC74F
Y REF SYNC SEPARATOR
IC609
SN74LS221NS
Y REF SYNC DELAY
TP601
RV600
PB Y/CHROMA DELAY
IC610
CX7993A
ENCODE TIMING PROCCESSOR
Q606
DTC144EK
TP605
IC611
TC4030BF
Q602
DTC144EK
(PAL/PM)
IC614
TC74HC00F
IC615
TC74HC221F
D602
RD6.8M
D604
1SS123
D606
1S2837
IC105
IC306
TC4053BFHB
TP606
IC612
S-8053ALR
TP602
TP603
Q603
2SC2715Y
IC611
TC4030BF
IC801
BX-1461
910 fh OSC
IC802
TL082CPS
ERROR AMP
Q800
2SC1623
Q801
2SC1623
910 fh VCO
SAWTOOTH GEN
SH
801
802
TP800
E600
LV800
VCO
IC613
TC74HC00F
SYSTEM CLOCK/CCD CLOCK GENERATOR
TP604
X600
NTSC:10.74MHz
PAL :10.64MHz
PM :10.74MHz
IC803
TC5040I3BF
803
(PAL/PM)
SW+5V
SW-5V
Y CLAMP OUT 20-1
PB Y REF SYNC OUT (X) 19-4
PB Y REF SYNC OUT (G) 19-5
CR OUT 2/3
CR OUT 20-3
BLK OUT 20-4
LINE MUTE IN 2/3
VD OUT 2/3
VD OUT (X) 19-6
VD OUT (G) 19-7
BF OUT 34-3
H BLK OUT 34-2
CCL OUT 34-1
CCD CK OUT 1 1/3
CCD CK OUT (1) 1/3
CCD CK (2) OUT 2/3
LALT OUT 34-4
PR-104 18-1
PR-104 17-4
PR-104 17-5
PR-104 18-3
PR-104 18-4
PR-104 17-6
PR-104 17-7
PR-104 35-3
PR-104 35-2
PR-104 35-1
PR-104 35-4

	R657	R658	R659	R817	R818
NTSC	0Ω	0Ω	0Ω	OPEN	OPEN
PAL	OPEN	0Ω	OPEN	0Ω	OPEN
PM	0Ω	OPEN	OPEN	OPEN	0Ω

PR-103/-103P(3/3)
1-623-986-14 (5)
VA-500
VA-500P

PR-104/-104P(1/3); CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
NR-27/-27A; NOISE REDUCTION

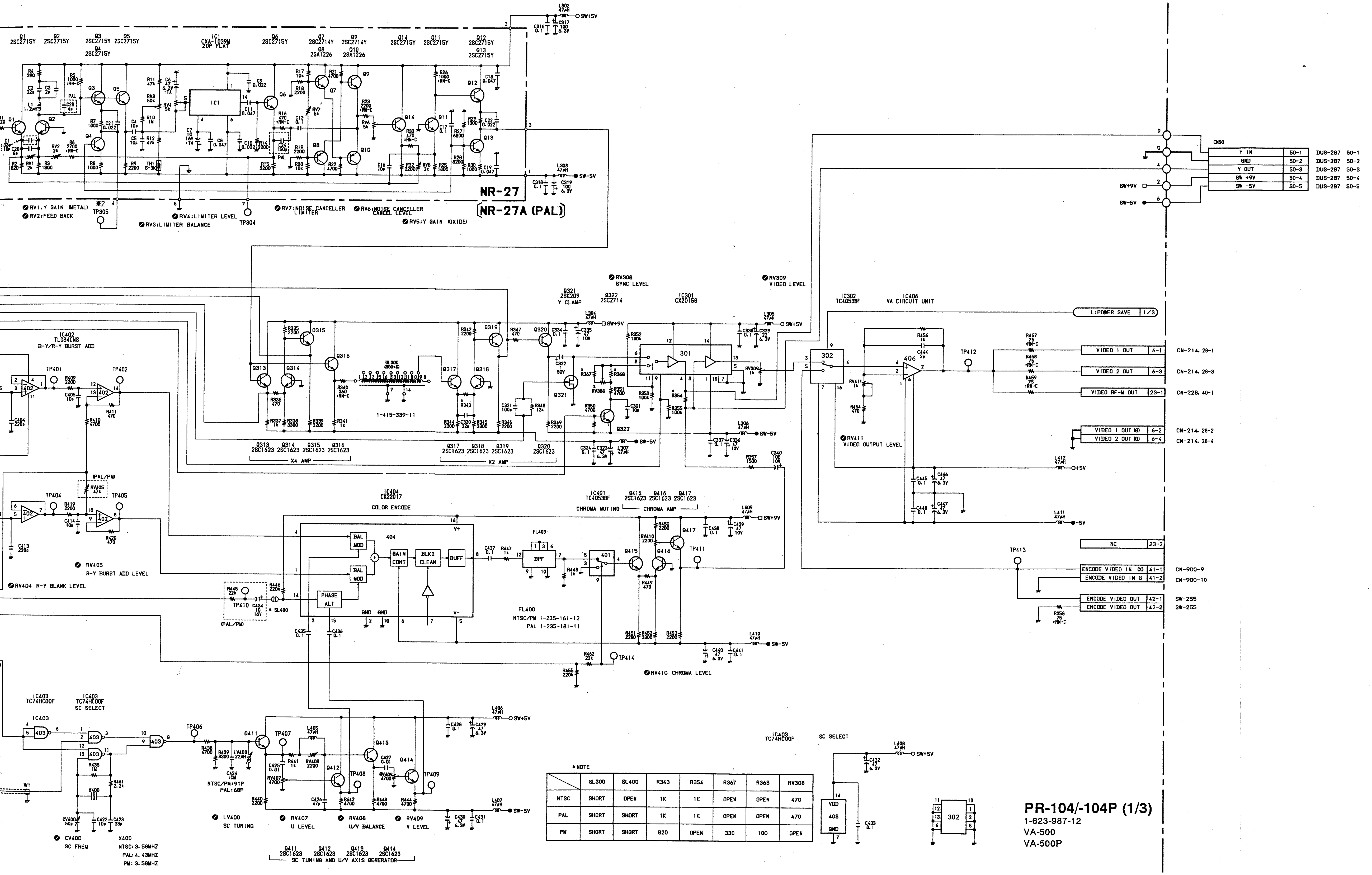

PR-103, 32-1 33-1 SEL'D Y IN
PR-103, 32-2 33-2 SEL'D Y IN
PR-103, 32-3 33-3 H:METAL IN 2
PR-103, 32-6 33-6 DLY'D Y OUT
PR-103, 32-5 33-5 AMP'D Y OUT
PR-103, 32-4 33-4 PB Y OUT
PR-103, 20-1 18-1 Y CLAMP IN
PR-103, 20-4 18-4 SG IN
PR-103, 20-3 18-3 CR IN
3/3 PB B-Y IN
3/3 PB B-Y IN
PR-103, 34-1 35-1 CCL IN
PR-103, 34-2 35-2 H BLK IN
3/3 PB R-Y IN
3/3 PB R-Y IN
PR-103, 34-3 35-3 BF IN
PR-103, 34-4 35-4 LALT IN
PR-103, 34-5 35-5 L:PLAY IN
CN-214, 27-1 5-1 EXT SC IN
CN-214, 27-2 5-2 EXT SC IN
AU-99, 15-1 16-1 +9V IN
AU-99, 15-2 16-2 +5V IN
PR-103, 20-2 18-2 L:POW SAVE
/3 L:POWER SAVE
AU-99, 15-5 16-5 -5V IN
AU-99, 15-3 16-3 GND
AU-99, 15-4 16-4 GND
Q323 2SA1162G
Q324 2SC2715Y
IC304 CX20158
RV307:Y LEVEL (METAL)
TP300
TP302
TP303
TP305
NR-27
(NR-27A (PAL))
IC1 CXA-1039M 20P FLAT
RV1:Y GAIN (METAL)
RV2:FEED BACK
RV3:LIMITER BALANCE
RV4:LIMITER LEVEL
RV7:NOISE CANCELLER LIMITER
RV6:NOISE CANCELLER CANCEL LEVEL
RV5:Y GAIN (OXIDE)
TP304
Q400 2SA812
Q403 2SA812
Q401 2SK209
Q404 2SK209
IC400 TL082CPS
Q402 2SC1623
Q405 2SC1623
B-Y/R-Y CLAMP
IC401 TC4053BF
B-Y/R-Y BLK
IC402 TL084CNS
B-Y/R-Y BURST ADD
RV400 B-Y LEVEL
RV401 B-Y CLAMP LEVEL
RV402 B-Y BLANK LEVEL
RV403 R-Y CLAMP LEVEL
RV404 R-Y BLANK LEVEL
RV405 R-Y BURST ADD LEVEL
RV406 BURST ADD LEVEL
Q406 2SA812
Q407 2SC1623
TP401
TP402
TP404
TP405
RV308 SYNC LEVEL
RV309 VIDEO LEVEL
Q321 2SK209 Y CLAMP
Q322 2SC2714
IC301 CX20158
DL300
1-415-339-11
Q313 2SC1623
Q314 2SC1623
Q315 2SC1623
Q316 2SC1623
X4 AMP
Q317 2SC1623
Q318 2SC1623
Q319 2SC1623
X2 AMP
Q320 2SC1623
IC404 CX22017
COLOR ENCODE
BAL MOD
GAIN CONT
BLKG CLEAN
BUFF
PHASE ALT
FL400
BPF
FL400
NTSC/PM 1-235-161-12
PAL 1-235-181-11
IC401 TC4053BF
CHROMA MUTING
Q415 2SC1623
Q416 2SC1623
Q417 2SC1623
CHROMA AMP
RV410 CHROMA LEVEL
TP410
TP411
TP414
Q900 2SB822
Q901 2SC2715
Q902 2SD1055
900
901
IC900 NJM78L02A
IC901 NJM79L03A
Q904 2SD1055
Q903 2SC2715
E900
Q408 2SC2715Y
Q409 2SC2715Y
D400 1SS123
Q410 2SC2715Y
IC403 TC74HC00F
IC403 TC74HC00F SC SELECT
CV400 SC FREQ
X400
NTSC: 3.58MHZ
PAL: 4.43MHZ
PM: 3.58MHZ
TP406
TP407
TP408
TP409
LV400 SC TUNING
RV407 U LEVEL
RV408 U/V BALANCE
RV409 V LEVEL
Q411 2SC1623
Q412 2SC1623
Q413 2SC1623
Q414 2SC1623
SC TUNING AND U/V AXIS GENERATOR
SW+9V
SW+5V
SW-5V
+5V
-5V
REF -V
REF +V
A
B
C
D
E
F
G
H
1
2
3
4
5

✱1 S/N 10001~10270 (UC)
S/N 10001~10070 (J)
S/N 10001~10100 (EK)

✱2 S/N 10271 AND HIGHER (UC)
S/N 10071 AND HIGHER (J)
S/N 10101 AND HIGHER (EK)

*NOTE

	SL300	SL400	R343	R354	R367	R368	RV308
NTSC	SHORT	OPEN	1K	1K	OPEN	OPEN	470
PAL	SHORT	SHORT	1K	1K	OPEN	OPEN	470
PM	SHORT	SHORT	820	OPEN	330	100	OPEN

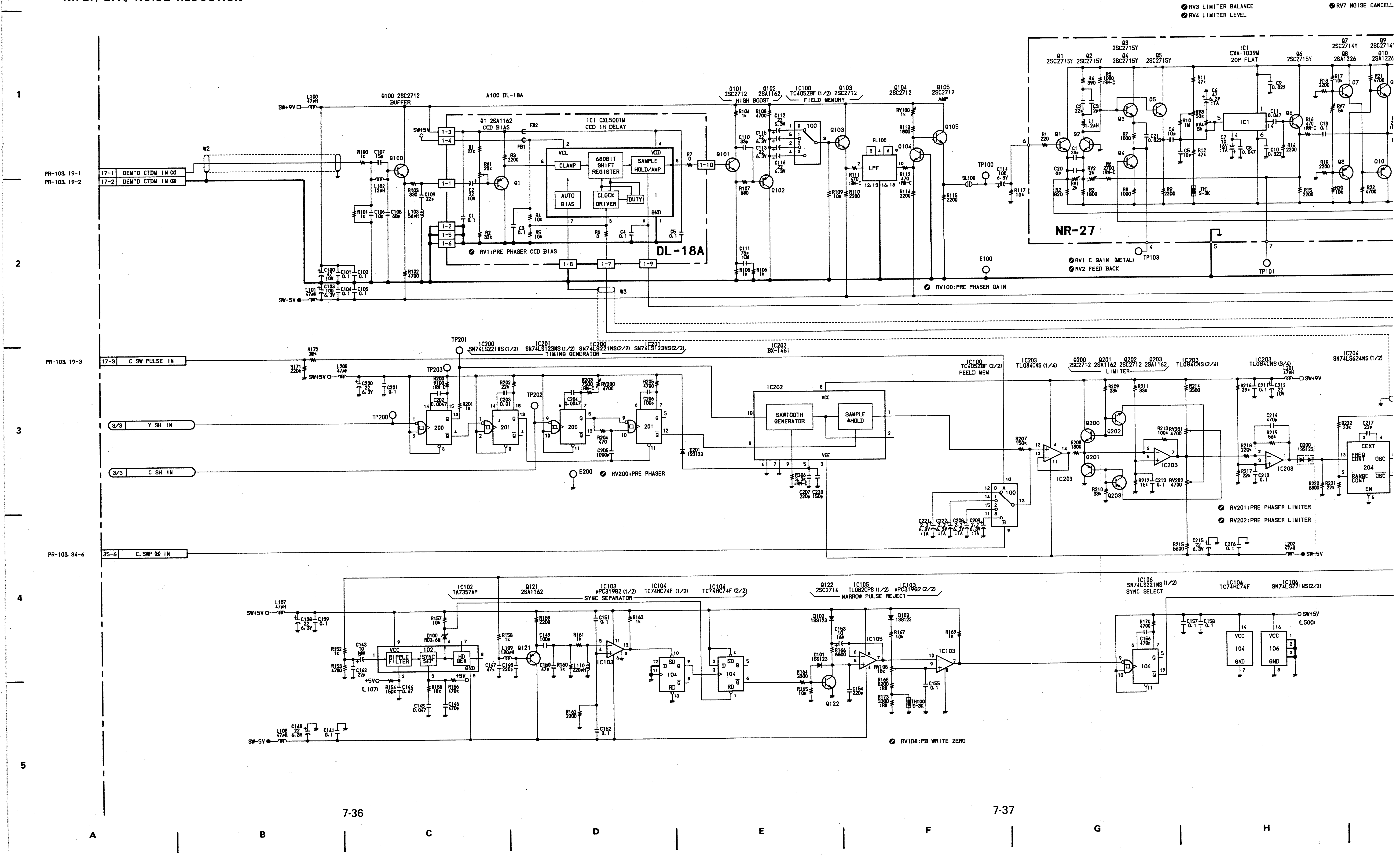

NR-27
NR-27A (PAL)
IC1 CXA-1039M 20P FLAT
RV1:Y GAIN (METAL)
RV2:FEED BACK
RV3:LIMITER BALANCE
RV4:LIMITER LEVEL
RV7:NOISE CANCELLER LIMITER
RV6:NOISE CANCELLER CANCEL LEVEL
RV5:Y GAIN (OXIDE)
TP305
TP304
IC402 TL084CNS B-Y/R-Y BURST ADD
TP401
TP402
TP404
TP405
RV405 R-Y BURST ADD LEVEL
RV404 R-Y BLANK LEVEL
PAL/PM
RV308 SYNC LEVEL
RV309 VIDEO LEVEL
Q321 2SK209 Y CLAMP
Q322 2SC2714
IC301 CX20158
IC302 TC4053BF
IC406 VA CIRCUIT UNIT
DL300
1-415-339-11
Q313 2SC1623 Q314 2SC1623 Q315 2SC1623 Q316 2SC1623
X4 AMP
Q317 2SC1623 Q318 2SC1623 Q319 2SC1623
X2 AMP
Q320 2SC1623
L:POWER SAVE 1/3
TP412
RV411 VIDEO OUTPUT LEVEL
IC404 CX22017 COLOR ENCODE
BAL MOD
GAIN CONT
BLKG CLEAN
BUFF
PHASE ALT
IC401 TC4053BF CHROMA MUTING
Q415 2SC1623 Q416 2SC1623 Q417 2SC1623 CHROMA AMP
FL400 BPF
FL400 NTSC/PM 1-235-161-12 PAL 1-235-181-11
TP410
TP411
TP413
TP414
RV410 CHROMA LEVEL
IC403 TC74HC00F
IC403 TC74HC00F SC SELECT
TP406
TP407
TP408
TP409
NTSC/PM:91P PAL:68P
LV400 SC TUNING
RV407 U LEVEL
RV408 U/V BALANCE
RV409 V LEVEL
CV400 SC FREQ
X400 NTSC:3.58MHZ PAL:4.43MHZ PM:3.58MHZ
Q411 2SC1623 Q412 2SC1623 Q413 2SC1623 Q414 2SC1623 SC TUNING AND U/V AXIS GENERATOR
CN50
Y IN 50-1 DUS-287 50-1
GND 50-2 DUS-287 50-2
Y OUT 50-3 DUS-287 50-3
SW +9V 50-4 DUS-287 50-4
SW -5V 50-5 DUS-287 50-5
VIDEO 1 OUT 6-1 CN-214, 28-1
VIDEO 2 OUT 6-3 CN-214, 28-3
VIDEO RF-M OUT 23-1 CN-228, 40-1
VIDEO 1 OUT (G) 6-2 CN-214, 28-2
VIDEO 2 OUT (G) 6-4 CN-214, 28-4
NC 23-2
ENCODE VIDEO IN (X) 41-1 CN-900-9
ENCODE VIDEO IN G 41-2 CN-900-10
ENCODE VIDEO OUT 42-1 SW-255
ENCODE VIDEO OUT 42-2 SW-255
SW+5V
SW-5V
SW+9V
E
F
G
H
I
J
K
L

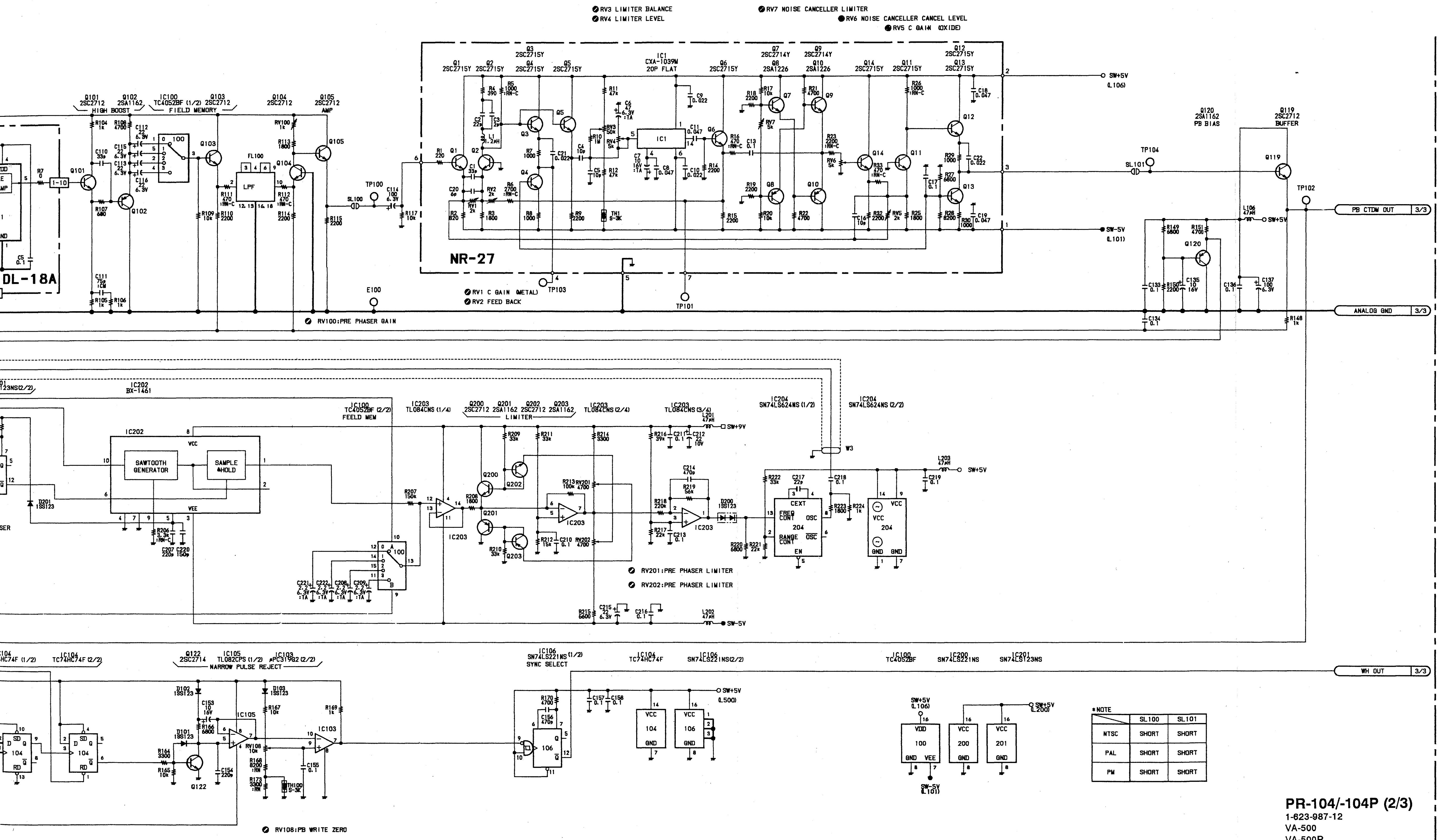
*NOTE

	SL300	SL400	R343	R354	R367	R368	RV308
NTSC	SHORT	OPEN	1K	1K	OPEN	OPEN	470
PAL	SHORT	SHORT	1K	1K	OPEN	OPEN	470
PM	SHORT	SHORT	820	OPEN	330	100	OPEN

PR-104/-104P (1/3)
1-623-987-12
VA-500
VA-500P

PR-104/-104P(2/3); CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
DL-18A; CHROMA 1H DELAY LINE
NR-27/-27A; NOISE REDUCTION


RV3 LIMITER BALANCE
RV4 LIMITER LEVEL
RV7 NOISE CANCELL
NR-27
IC1 CXA-1039M 20P FLAT
RV1 C GAIN (METAL)
RV2 FEED BACK
TP103
TP101
PR-103 19-1
PR-103 19-2
17-1 DEM'D CTDM IN (X)
17-2 DEM'D CTDM IN (B)
SW+9V
SW-5V
L100 47μH
L101 47μH
Q100 2SC2712 BUFFER
A100 DL-18A
Q1 2SA1162 CCD BIAS
IC1 CXL5001M CCD 1H DELAY
VCL
CLAMP
680BIT SHIFT REGISTER
SAMPLE HOLD/AMP
VDD
AUTO BIAS
CLOCK DRIVER
DUTY
GND
DL-18A
RV1:PRE PHASER CCD BIAS
Q101 2SC2712
Q102 2SA1162 HIGH BOOST
IC100 TC4052BF (1/2) FIELD MEMORY
Q103 2SC2712
Q104 2SC2712
Q105 2SC2712 AMP
FL100
LPF
TP100
SL100
E100
RV100:PRE PHASER GAIN
W2
W3
PR-103 19-3
17-3 C SW PULSE IN
3/3 Y SH IN
3/3 C SH IN
PR-103 34-6
35-6 C.SWP (B) IN
TP200
TP201
TP202
TP203
IC200 SN74LS221NS (1/2)
IC201 SN74LS123NS (1/2)
IC200 SN74LS221NS (2/2)
IC201 SN74LS123NS (2/2)
TIMING GENERATOR
IC202 BX-1461
SAWTOOTH GENERATOR
SAMPLE &HOLD
VCC
VEE
E200
RV200:PRE PHASER
D201 1SS123
IC100 TC4052BF (2/2) FEELD MEM
IC203 TL084CNS (1/4)
Q200 2SC2712
Q201 2SA1162
Q202 2SC2712
Q203 2SA1162
LIMITER
IC203 TL084CNS (2/4)
IC203 TL084CNS (3/4)
IC204 SN74LS624NS (1/2)
SW+9V
SW-5V
D200 1SS123
FREQ CONT
RANGE CONT
CEXT
OSC
EN
RV201:PRE PHASER LIMITER
RV202:PRE PHASER LIMITER
L202 47μH
SW+5V
L107 47μH
L108 47μH
IC102 TA7357AP
Q121 2SA1162
IC103 μPC319G2 (1/2)
IC104 TC74HC74F (1/2)
IC104 TC74HC74F (2/2)
SYNC SEPARATOR
RIPPLE FILTER
SYNC SEP
HD GEN
D100 RD3.6M
Q122 2SC2714
IC105 TL082CPS (1/2)
IC103 μPC319G2 (2/2)
NARROW PULSE REJECT
D101 1SS123
D102 1SS123
D103 1SS123
RV108:PB WRITE ZERO
TH100 S-3K
IC106 SN74LS221NS (1/2) SYNC SELECT
IC104 TC74HC74F
IC106 SN74LS221NS(2/2)
(L500)
1
2
3
4
5
A
B
C
D
E
F
G
H

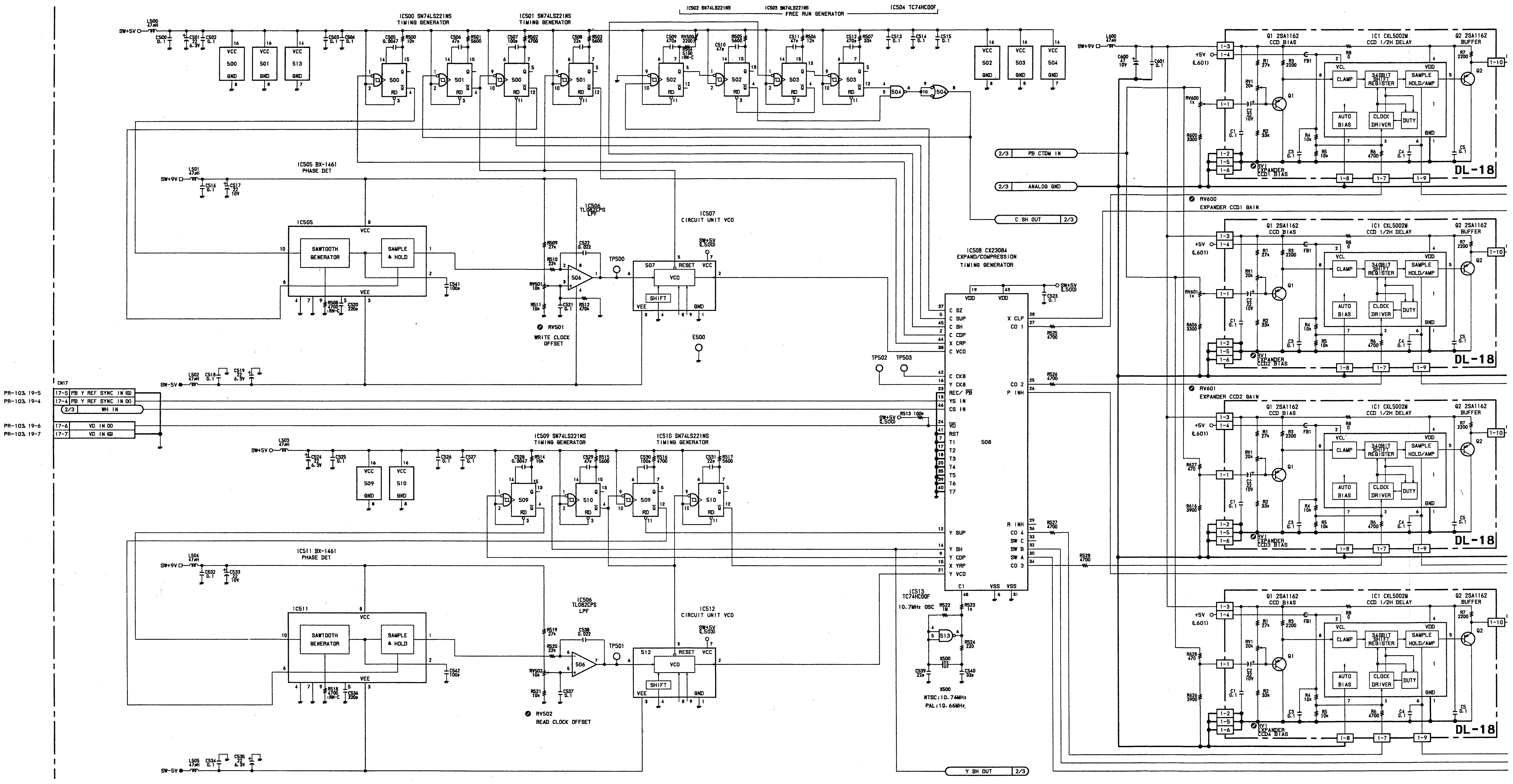

RV3 LIMITER BALANCE
RV4 LIMITER LEVEL
RV7 NOISE CANCELLER LIMITER
RV6 NOISE CANCELLER CANCEL LEVEL
RV5 C GAIN (OXIDE)
NR-27
IC1 CXA-1039M 20P FLAT
RV1 C GAIN (METAL)
RV2 FEED BACK
RV100:PRE PHASER GAIN
DL-18A
Q101 2SC2712
Q102 2SA1162 HIGH BOOST
IC100 TC4052BF (1/2) FIELD MEMORY
Q103 2SC2712
Q104 2SC2712
Q105 2SC2712 AMP
FL100 LPF
TP100
TP101
TP102
TP103
TP104
E100
SL100
SL101
SW+5V (L106)
SW-5V (L101)
Q120 2SA1162 PB BIAS
Q119 2SC2712 BUFFER
PB CTDM OUT 3/3
ANALOG GND 3/3
IC202 BX-1461
SAWTOOTH GENERATOR
SAMPLE &HOLD
IC100 TC4052BF (2/2) FEELD MEM
IC203 TL084CNS (1/4)
Q200 2SC2712
Q201 2SA1162
Q202 2SC2712
Q203 2SA1162 LIMITER
IC203 TL084CNS (2/4)
IC203 TL084CNS (3/4)
IC204 SN74LS624NS (1/2)
IC204 SN74LS624NS (2/2)
SW+9V
SW+5V
SW-5V
RV201:PRE PHASER LIMITER
RV202:PRE PHASER LIMITER
IC104 TC74HC74F (2/2)
Q122 2SC2714
IC105 TL082CPS (1/2)
IC103 μPC3192G2 (2/2) NARROW PULSE REJECT
IC106 SN74LS221NS (1/2) SYNC SELECT
IC104 TC74HC74F
IC106 SN74LS221NS (2/2)
IC100 TC4052BF
IC200 SN74LS221NS
IC201 SN74LS123NS
RV108:PB WRITE ZERO
WH OUT 3/3

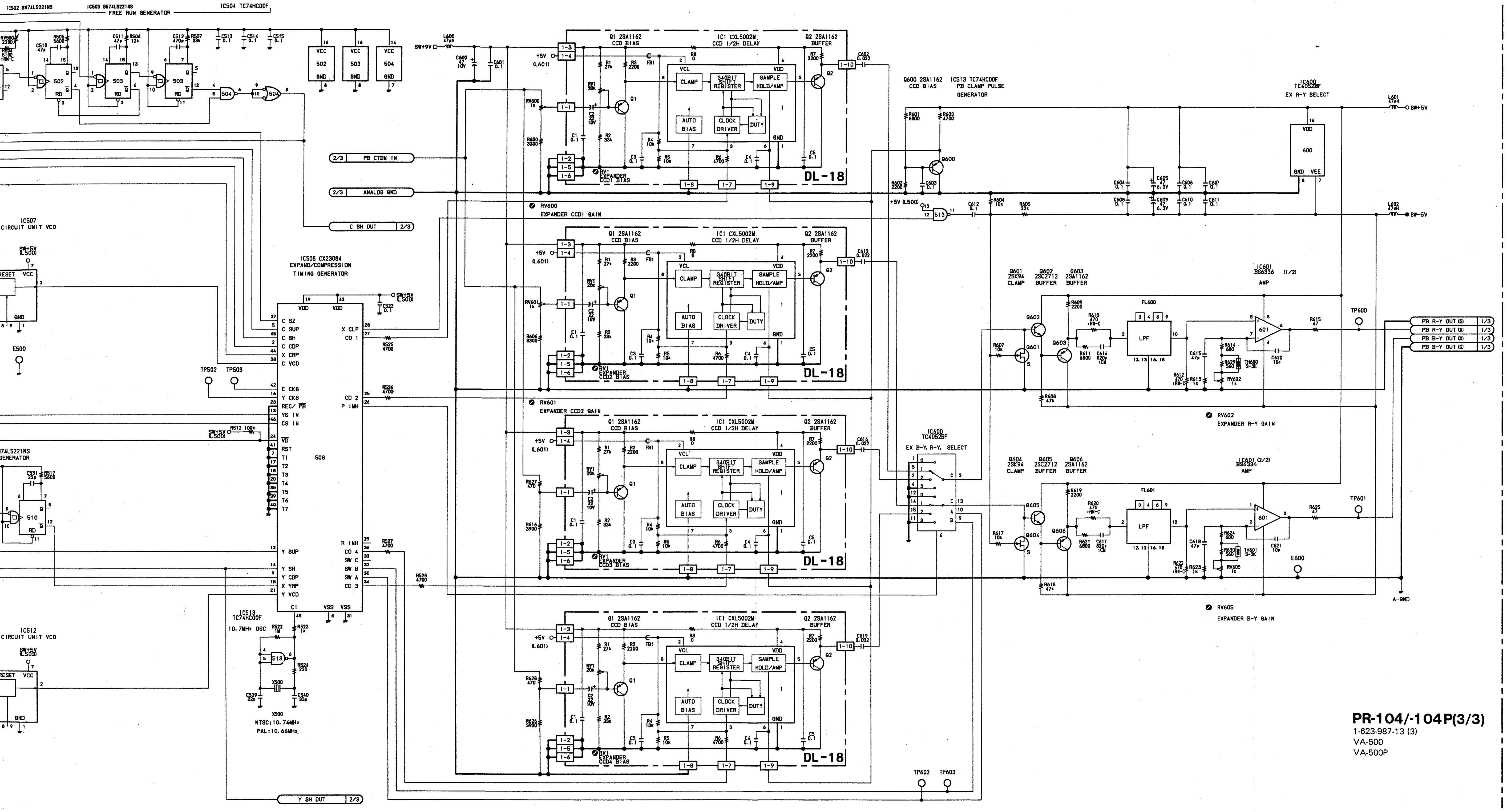
*NOTE

	SL100	SL101
NTSC	SHORT	SHORT
PAL	SHORT	SHORT
PM	SHORT	SHORT

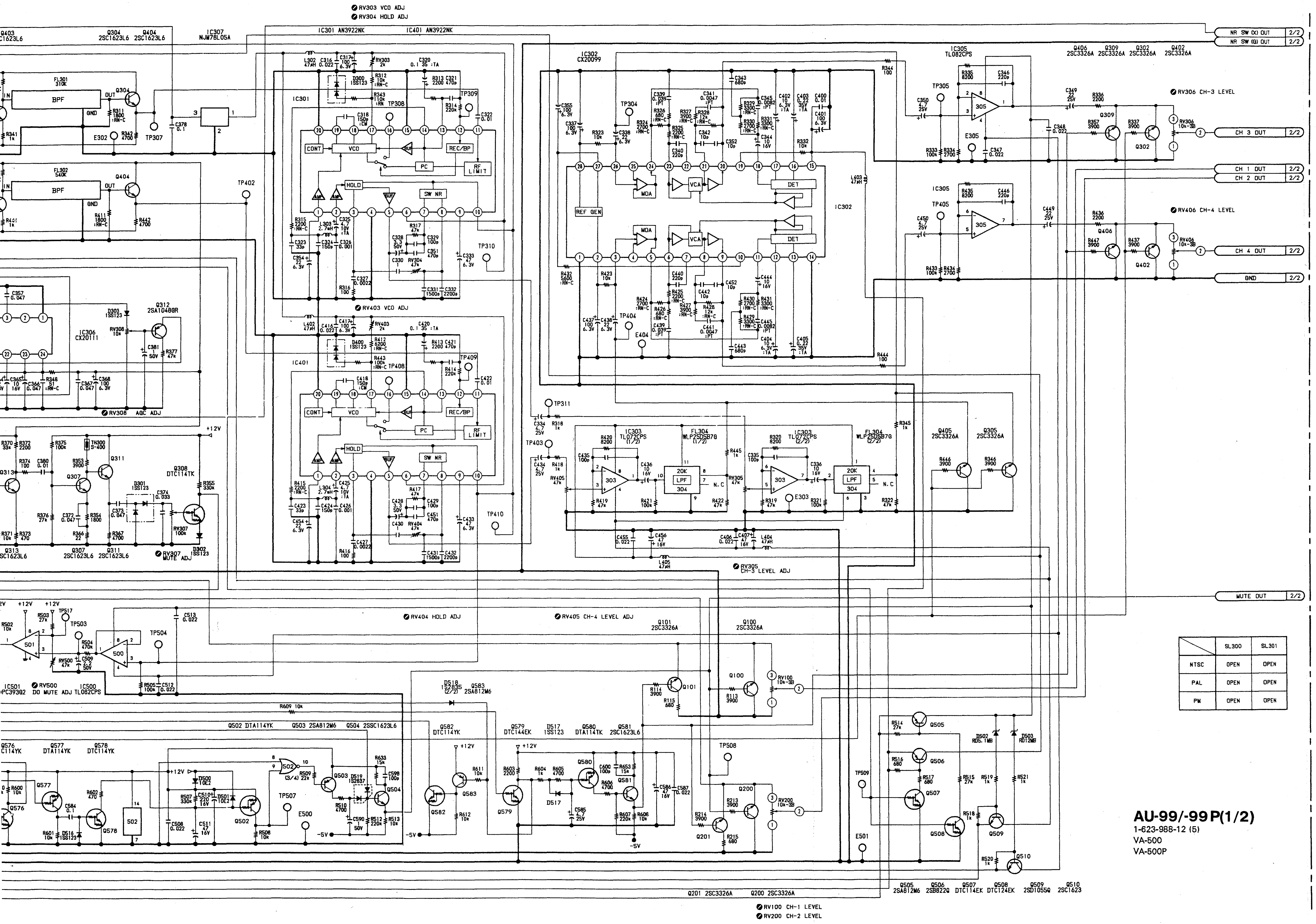
PR-104/-104P (2/3)
1-623-987-12
VA-500
VA-500P

PR-104/-104P(3/3); CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
DL-18; CHROMA 1/2H DELAY LINE


1
2
3
4
5
IC500 SN74LS221NS TIMING GENERATOR
IC501 SN74LS221NS TIMING GENERATOR
IC502 SN74LS221NS
IC503 SN74LS221NS
FREE RUN GENERATOR
IC504 TC74HC00F
IC505 BX-1461 PHASE DET
SAWTOOTH GENERATOR
SAMPLE & HOLD
IC506 TL082CPS LPF
IC507 CIRCUIT UNIT VCO
TP500
RV501 WRITE CLOCK OFFSET
E500
TP502
TP503
IC508 CX23084 EXPAND/COMPRESSION TIMING GENERATOR
CN17
PR-103 19-5
PR-103 19-4
PR-103 19-6
PR-103 19-7
PB Y REF SYNC IN
WH IN
VD IN
IC509 SN74LS221NS TIMING GENERATOR
IC510 SN74LS221NS TIMING GENERATOR
IC511 BX-1461 PHASE DET
IC512 CIRCUIT UNIT VCO
TP501
RV502 READ CLOCK OFFSET
IC513 TC74HC00F
10.7MHz OSC
X500
NTSC:10.74MHz
PAL:10.66MHz
PB CTDM IN
ANALOG GND
C SH OUT
Y SH OUT
Q1 2SA1162 CCD BIAS
IC1 CXL5002M CCD 1/2H DELAY
Q2 2SA1162 BUFFER
CLAMP
340BIT SHIFT REGISTER
SAMPLE HOLD/AMP
AUTO BIAS
CLOCK DRIVER
DUTY
RV1 EXPANDER CCD1 BIAS
RV600 EXPANDER CCD1 GAIN
RV1 EXPANDER CCD2 BIAS
RV601 EXPANDER CCD2 GAIN
RV1 EXPANDER CCD3 BIAS
RV1 EXPANDER CCD4 BIAS
DL-18
DL-18
DL-18
DL-18


IC502 SN74LS221NS
IC503 SN74LS221NS
FREE RUN GENERATOR
IC504 TC74HC00F
IC507 CIRCUIT UNIT VCO
IC508 CX23084 EXPAND/COMPRESSION TIMING GENERATOR
IC510 SN74LS221NS
IC512 CIRCUIT UNIT VCO
IC513 TC74HC00F
10.7MHz OSC
X500
NTSC:10.74MHz
PAL:10.66MHz
PB CTDM IN
ANALOG GND
C SH OUT
Y SH OUT
2/3
Q1 2SA1162 CCD BIAS
IC1 CXL5002M CCD 1/2H DELAY
Q2 2SA1162 BUFFER
VCL
CLAMP
340BIT SHIFT REGISTER
SAMPLE HOLD/AMP
AUTO BIAS
CLOCK DRIVER
DUTY
VDD
GND
DL-18
RV1 EXPANDER CCD1 BIAS
RV1 EXPANDER CCD2 BIAS
RV1 EXPANDER CCD3 BIAS
RV1 EXPANDER CCD4 BIAS
RV600 EXPANDER CCD1 GAIN
RV601 EXPANDER CCD2 GAIN
Q600 2SA1162 CCD BIAS
IC513 TC74HC00F PB CLAMP PULSE GENERATOR
IC600 TC4052BF EX R-Y SELECT
IC600 TC4052BF EX B-Y, R-Y, SELECT
Q601 2SK94 CLAMP
Q602 2SC2712 BUFFER
Q603 2SA1162 BUFFER
Q604 2SK94 CLAMP
Q605 2SC2712 BUFFER
Q606 2SA1162 BUFFER
FL600
FL601
LPF
IC601 BS6336 (1/2) AMP
IC601 (2/2) BS6336 AMP
RV602 EXPANDER R-Y GAIN
RV605 EXPANDER B-Y GAIN
TP502
TP503
TP600
TP601
TP602
TP603
E500
E600
A-GND
SW+9V
SW+5V
SW-5V
PB R-Y OUT
PB B-Y OUT
1/3

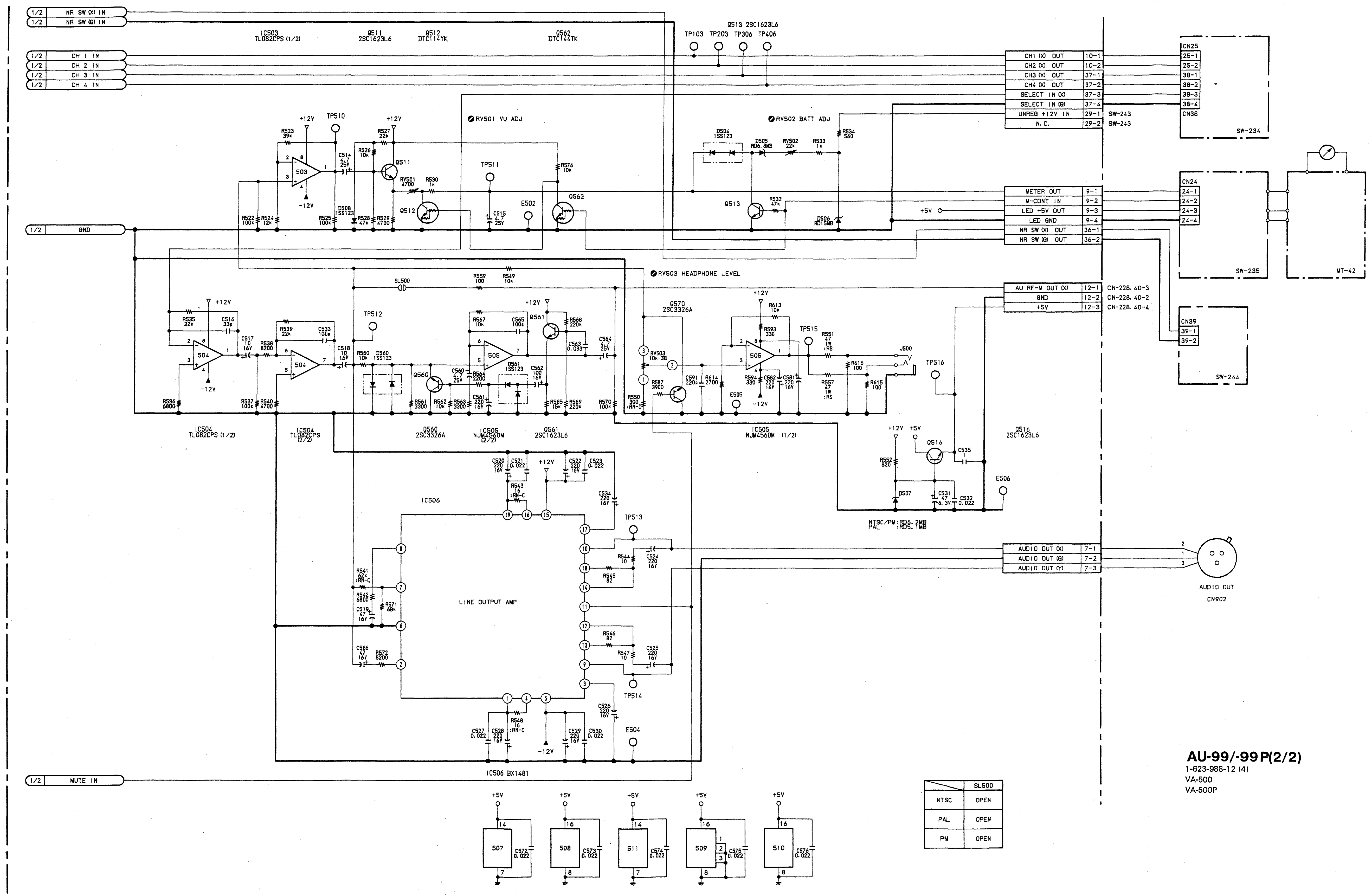
PR-104/-104P(3/3)
1-623-987-13 (3)
VA-500
VA-500P


RV303 VCO ADJ
RV304 HOLD ADJ
IC301 AN3922NK
IC401 AN3922NK
IC307 NJM78L05A
IC302 CX20099
IC305 TL082CPS
IC303 TL072CPS
IC306 CX20111
FL301 310K
FL302 540K
BPF
FL304 WLP25D5B7G
RV403 VCO ADJ
RV404 HOLD ADJ
RV405 CH-4 LEVEL ADJ
RV305 CH-3 LEVEL ADJ
RV306 CH-3 LEVEL
RV406 CH-4 LEVEL
RV307 MUTE ADJ
RV308 AGC ADJ
RV500 DO MUTE ADJ
IC501 μPC393G2
IC500 TL082CPS
NR SW (X) OUT
NR SW (G) OUT
CH 3 OUT
CH 1 OUT
CH 2 OUT
CH 4 OUT
GND
MUTE OUT
2/2
REF GEN
MOA
VCA
DET
CONT
VCO
PC
REC/BP
RF LIMIT
HOLD
SW NR
LPF
Q101 2SC3326A
Q100 2SC3326A
Q201 2SC3326A
Q200 2SC3326A
Q505 2SA812M6
Q506 2SB822Q
Q507 DTC114EK
Q508 DTC124EK
Q509 2SD1055Q
Q510 2SC1623
RV100 CH-1 LEVEL
RV200 CH-2 LEVEL
+12V
-5V

	SL300	SL301
NTSC	OPEN	OPEN
PAL	OPEN	OPEN
PM	OPEN	OPEN

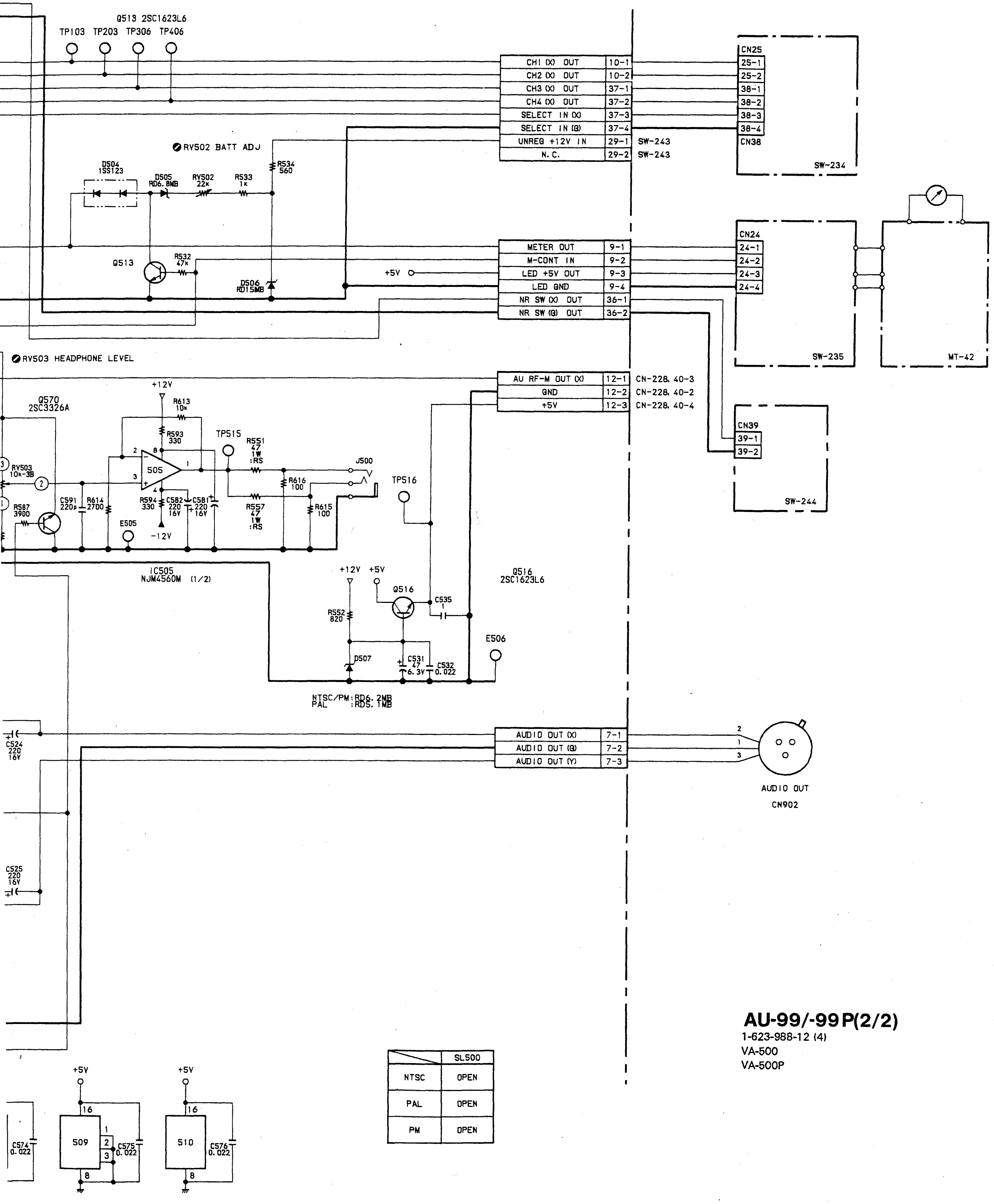
AU-99/-99P(1/2)
1-623-988-12 (5)
VA-500
VA-500P

AU-99/-99P(2/2); AUDIO SYSTEM


1/2 NR SW (X) IN
1/2 NR SW (G) IN
1/2 CH 1 IN
1/2 CH 2 IN
1/2 CH 3 IN
1/2 CH 4 IN
1/2 GND
1/2 MUTE IN
IC503 TL082CPS (1/2)
Q511 2SC1623L6
Q512 DTC114YK
Q562 DTC144TK
Q513 2SC1623L6
TP103 TP203 TP306 TP406
RV501 VU ADJ
RV502 BATT ADJ
RV503 HEADPHONE LEVEL
TP510
TP511
TP512
TP513
TP514
TP515
TP516
E502
E504
E505
E506
SL500
IC504 TL082CPS (1/2)
IC504 TL082CPS (2/2)
Q560 2SC3326A
IC505 NJM4560M (2/2)
Q561 2SC1623L6
Q570 2SC3326A
IC505 NJM4560M (1/2)
Q516 2SC1623L6
J500
IC506
LINE OUTPUT AMP
IC506 BX1481
NTSC/PM:RD6.2MB
PAL :RD5.1MB
CH1 (X) OUT 10-1
CH2 (X) OUT 10-2
CH3 (X) OUT 37-1
CH4 (X) OUT 37-2
SELECT IN (X) 37-3
SELECT IN (G) 37-4
UNREG +12V IN 29-1 SW-243
N. C. 29-2 SW-243
CN25 25-1 25-2 38-1 38-2 38-3 38-4 CN38
SW-234
METER OUT 9-1
M-CONT IN 9-2
LED +5V OUT 9-3
LED GND 9-4
NR SW (X) OUT 36-1
NR SW (G) OUT 36-2
CN24 24-1 24-2 24-3 24-4
SW-235
MT-42
AU RF-M OUT (X) 12-1 CN-228, 40-3
GND 12-2 CN-228, 40-2
+5V 12-3 CN-228, 40-4
CN39 39-1 39-2
SW-244
AUDIO OUT (X) 7-1
AUDIO OUT (G) 7-2
AUDIO OUT (Y) 7-3
AUDIO OUT
CN902
507
508
511
509
510
1
2
3
4
5
A
B
C
D
E
F
G
H

	SL500
NTSC	OPEN
PAL	OPEN
PM	OPEN

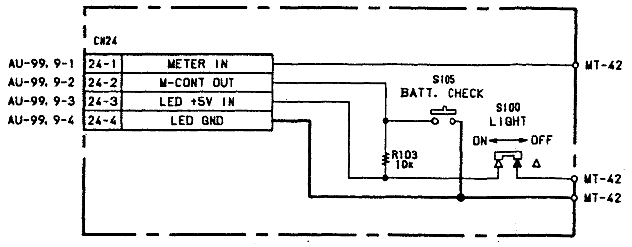
AU-99/-99P(2/2)
1-623-988-12 (4)
VA-500
VA-500P


Q513 2SC1623L6
TP103 TP203 TP306 TP406
CH1 (X) OUT 10-1
CH2 (X) OUT 10-2
CH3 (X) OUT 37-1
CH4 (X) OUT 37-2
SELECT IN (X) 37-3
SELECT IN (G) 37-4
UNREG +12V IN 29-1 SW-243
N.C. 29-2 SW-243
CN25 25-1 25-2 38-1 38-2 38-3 38-4 CN38
SW-234
RV502 BATT ADJ
D504 1SS123
D505 RD6.8MB
RV502 22k
R533 1k
R534 560
Q513
R532 47k
D506 RD15MB
+5V
METER OUT 9-1
M-CONT IN 9-2
LED +5V OUT 9-3
LED GND 9-4
NR SW (X) OUT 36-1
NR SW (G) OUT 36-2
CN24 24-1 24-2 24-3 24-4
SW-235
MT-42
RV503 HEADPHONE LEVEL
AU RF-M OUT (X) 12-1 CN-228, 40-3
GND 12-2 CN-228, 40-2
+5V 12-3 CN-228, 40-4
CN39 39-1 39-2
SW-244
+12V
R613 10k
Q570 2SC3326A
R593 330
TP515
R551 47 1W :RS
J500
505
RV503 10k-3B
R616 100
TP516
C591 220p
R614 2700
R594 330
C582 220 16V
C581 220 16V
R557 47 1W :RS
R615 100
R587 3900
E505
-12V
IC505 NJM4560M (1/2)
+12V +5V
Q516
Q516 2SC1623L6
C535 1
R552 820
D507
C531 47 6.3V
C532 0.022
E506
NTSC/PM:RD6.2MB
PAL :RD5.1MB
C524 220 16V
AUDIO OUT (X) 7-1
AUDIO OUT (G) 7-2
AUDIO OUT (Y) 7-3
2 1 3
AUDIO OUT
CN902
C525 220 16V
+5V +5V
16 509 8
16 510 8
C574 0.022
C575 0.022
C576 0.022

	SL500
NTSC	OPEN
PAL	OPEN
PM	OPEN

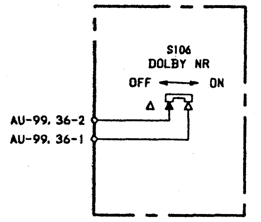
AU-99/-99P(2/2)
1-623-988-12 (4)
VA-500
VA-500P

SW-235; AUDIO MIX SWITCH


CN24
AU-99, 9-1 24-1 METER IN
AU-99, 9-2 24-2 M-CONT OUT
AU-99, 9-3 24-3 LED +5V IN
AU-99, 9-4 24-4 LED GND
S105 BATT. CHECK
S100 LIGHT
ON ← → OFF
R103 10k
MT-42
MT-42
MT-42

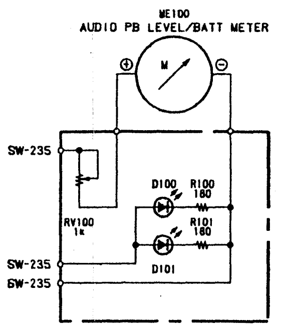
SW-235
1-623-806-11 (1)
VA-500
VA-500P

SW-244; DOLBY ON/OFF SWITCH


S106
DOLBY NR
OFF ← → ON
AU-99, 36-2
AU-99, 36-1

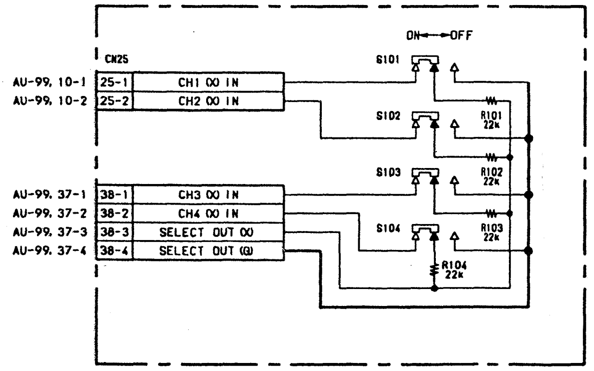
SW-244
1-623-803-11 (1)
VA-500
VA-500P

MT-42; AUDIO MIX METER


ME100
AUDIO PB LEVEL/BATT METER
⊕ ⊖
M
SW-235
RV100 1k
D100 R100 180
R101 180
D101
SW-235
SW-235

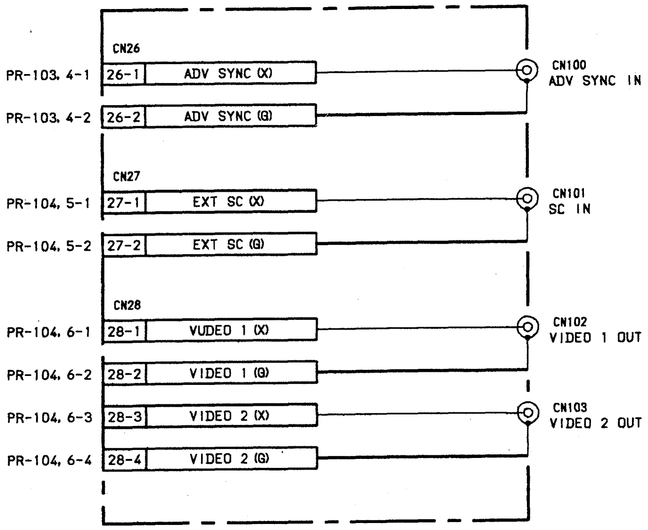
MT-42
1-623-805-12 (1)
VA-500
VA-500P

SW-234; AUDIO MONITOR SELECT SWITCH


ON ← → OFF
CN25
S101
S102
S103
S104
R101 22k
R102 22k
R103 22k
R104 22k
AU-99, 10-1 25-1 CH1 (X) IN
AU-99, 10-2 25-2 CH2 (X) IN
AU-99, 37-1 38-1 CH3 (X) IN
AU-99, 37-2 38-2 CH4 (X) IN
AU-99, 37-3 38-3 SELECT OUT (X)
AU-99, 37-4 38-4 SELECT OUT (G)

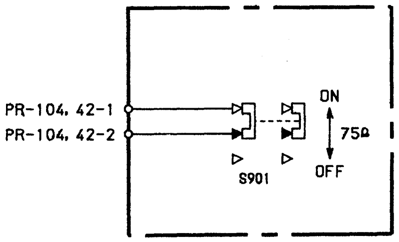
SW-234
1-623-802-11 (1)
VA-500
VA-500P

CN-214; BNC RELAY BOARD


CN26
PR-103, 4-1
26-1
ADV SYNC (X)
PR-103, 4-2
26-2
ADV SYNC (G)
CN100
ADV SYNC IN
CN27
PR-104, 5-1
27-1
EXT SC (X)
PR-104, 5-2
27-2
EXT SC (G)
CN101
SC IN
CN28
PR-104, 6-1
28-1
VUDEO 1 (X)
PR-104, 6-2
28-2
VIDEO 1 (G)
CN102
VIDEO 1 OUT
PR-104, 6-3
28-3
VIDEO 2 (X)
PR-104, 6-4
28-4
VIDEO 2 (G)
CN103
VIDEO 2 OUT

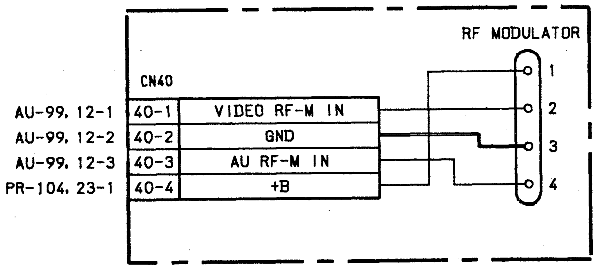
CN-214
1-623-990-11 (1)
VA-500
VA-500P

SW-255; 75Ω TERMINATE SWITCH


PR-104, 42-1
PR-104, 42-2
ON
75Ω
OFF
S901

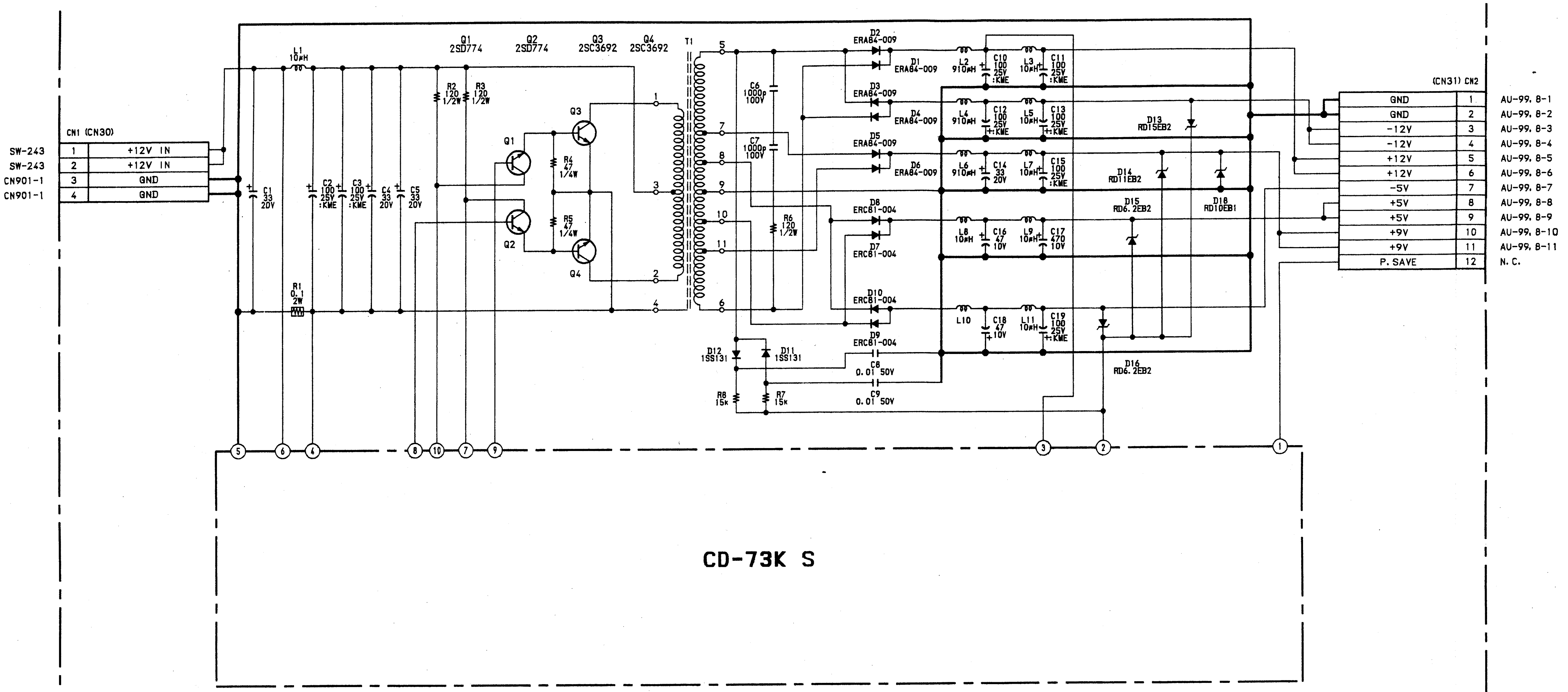
SW-255
1-623-989-11 (1)
VA-500
VA-500P

CN-228; RF MODULATOR CONNECTION BOARD


RF MODULATOR
CN40
AU-99, 12-1
40-1
VIDEO RF-M IN
AU-99, 12-2
40-2
GND
AU-99, 12-3
40-3
AU RF-M IN
PR-104, 23-1
40-4
+B
1
2
3
4

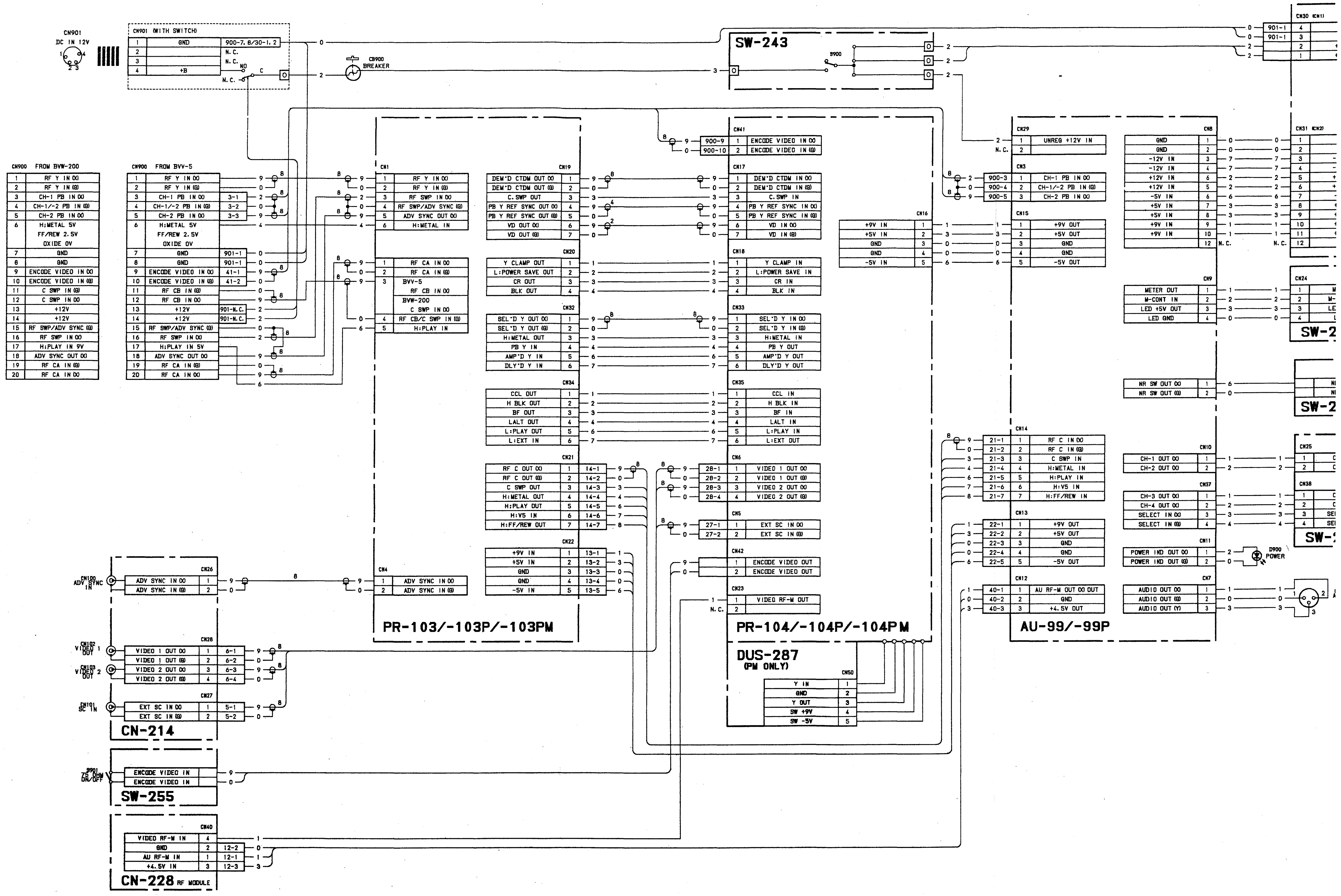
CN-228
1-623-801-11 (1)
VA-500
VA-500P

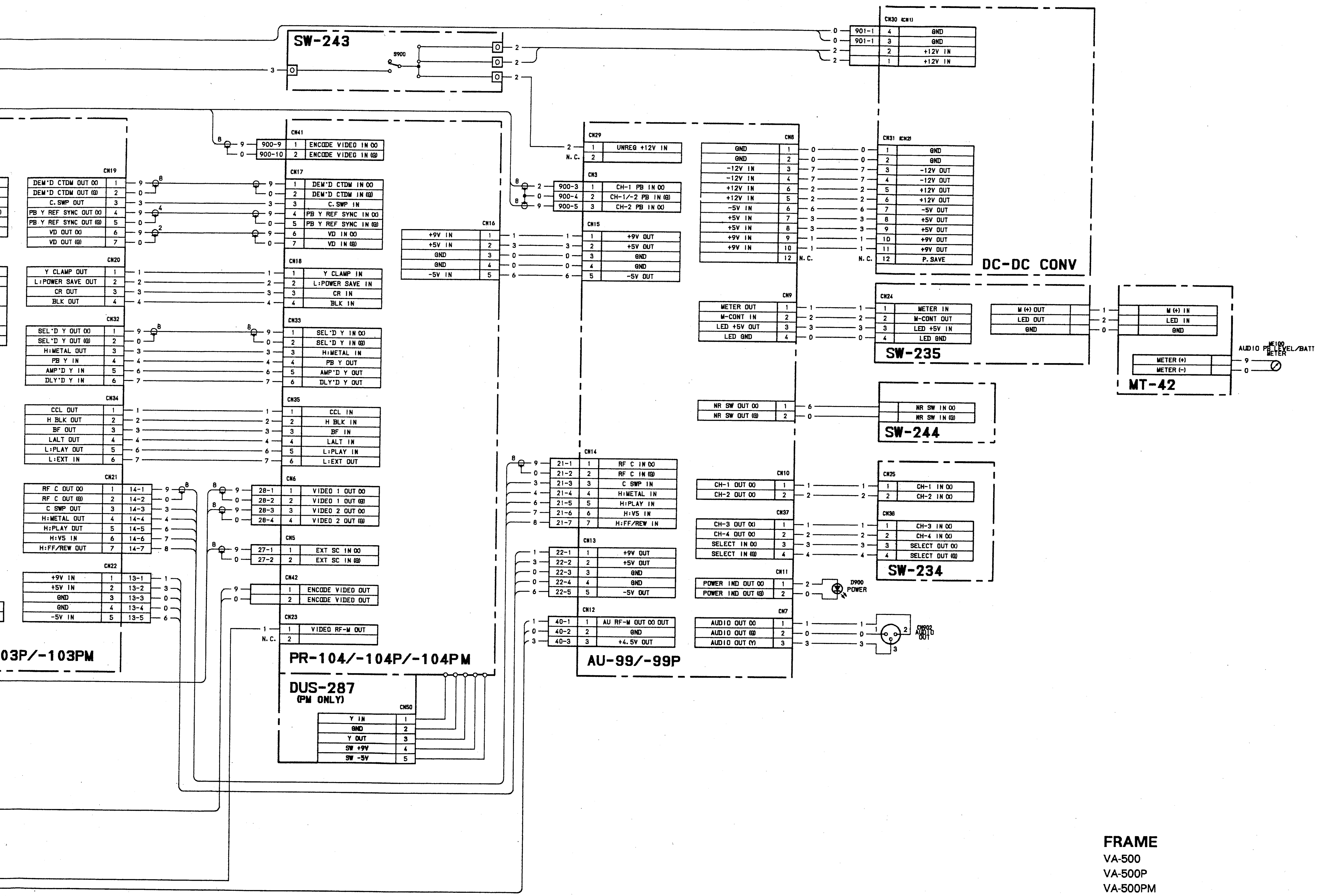
DC-DC CONV.; DC-DC CONVERTER


CN1 (CN30)
SW-243 1 +12V IN
SW-243 2 +12V IN
CN901-1 3 GND
CN901-1 4 GND
L1 10µH
R1 0.1 2W
C1 33 20V
C2 100 25V :KME
C3 100 25V :KME
C4 33 20V
C5 33 20V
R2 120 1/2W
R3 120 1/2W
Q1 2SD774
Q2 2SD774
Q3 2SC3692
Q4 2SC3692
R4 47 1/4W
R5 47 1/4W
T1
C6 1000p 100V
C7 1000p 100V
R6 120 1/2W
D1 ERA84-009
D2 ERA84-009
D3 ERA84-009
D4 ERA84-009
D5 ERA84-009
D6 ERA84-009
D7 ERC81-004
D8 ERC81-004
D9 ERC81-004
D10 ERC81-004
D11 1SS131
D12 1SS131
R7 15k
R8 15k
C8 0.01 50V
C9 0.01 50V
L2 910µH
L3 10µH
L4 910µH
L5 10µH
L6 910µH
L7 10µH
L8 10µH
L9 10µH
L10
L11 10µH
C10 100 25V :KME
C11 100 25V :KME
C12 100 25V :KME
C13 100 25V :KME
C14 33 20V
C15 100 25V :KME
C16 47 10V
C17 470 10V
C18 47 10V
C19 100 25V :KME
D13 RD15EB2
D14 RD11EB2
D15 RD6.2EB2
D16 RD6.2EB2
D18 RD10EB1
(CN31) CN2
GND 1 AU-99, 8-1
GND 2 AU-99, 8-2
-12V 3 AU-99, 8-3
-12V 4 AU-99, 8-4
+12V 5 AU-99, 8-5
+12V 6 AU-99, 8-6
-5V 7 AU-99, 8-7
+5V 8 AU-99, 8-8
+5V 9 AU-99, 8-9
+9V 10 AU-99, 8-10
+9V 11 AU-99, 8-11
P. SAVE 12 N. C.
⑤ ⑥ ④ ⑧ ⑩ ⑦ ⑨ ③ ② ①
CD-73K S

DC-DC CONVERTER
(CD-73K)
VA-500
VA-500P

FRAME


CN901 DC IN 12V
CN901 (WITH SWITCH)
GND
+B
N.C.
CB900 BREAKER
SW-243
S900
CN900 FROM BVW-200
CN900 FROM BVV-5
RF Y IN (X)
RF Y IN (G)
CH-1 PB IN (X)
CH-1/-2 PB IN (G)
CH-2 PB IN (X)
H:METAL 5V
FF/REW 2.5V
OXIDE 0V
ENCODE VIDEO IN (X)
ENCODE VIDEO IN (G)
C SWP IN (G)
C SWP IN (X)
+12V
RF SWP/ADV SYNC (G)
RF SWP IN (X)
H:PLAY IN 9V
ADV SYNC OUT (X)
RF CA IN (G)
RF CA IN (X)
RF CB IN (G)
RF CB IN (X)
CN1
CN4
CN19
CN20
CN32
CN34
CN21
CN22
CN41
CN17
CN18
CN33
CN35
CN6
CN5
CN42
CN23
CN16
CN29
CN3
CN15
CN14
CN13
CN12
CN8
CN9
CN10
CN37
CN11
CN7
CN30 (CN1)
CN31 (CN2)
CN24
CN25
CN38
DEM'D CTDM OUT (X)
DEM'D CTDM OUT (G)
C.SWP OUT
PB Y REF SYNC OUT (X)
PB Y REF SYNC OUT (G)
VD OUT (X)
VD OUT (G)
Y CLAMP OUT
L:POWER SAVE OUT
CR OUT
BLK OUT
SEL'D Y OUT (X)
SEL'D Y OUT (G)
H:METAL OUT
PB Y IN
AMP'D Y IN
DLY'D Y IN
CCL OUT
H BLK OUT
BF OUT
LALT OUT
L:PLAY OUT
L:EXT IN
RF C OUT (X)
RF C OUT (G)
C SWP OUT
H:PLAY OUT
H:VS IN
H:FF/REW OUT
+9V IN
+5V IN
-5V IN
ADV SYNC IN (X)
ADV SYNC IN (G)
PR-103/-103P/-103PM
ENCODE VIDEO IN (X)
ENCODE VIDEO IN (G)
VIDEO 1 OUT (X)
VIDEO 1 OUT (G)
VIDEO 2 OUT (X)
VIDEO 2 OUT (G)
EXT SC IN (X)
EXT SC IN (G)
ENCODE VIDEO OUT
VIDEO RF-M OUT
PR-104/-104P/-104PM
DUS-287 (PM ONLY)
CN50
Y IN
Y OUT
SW +9V
SW -5V
UNREG +12V IN
CH-1 PB IN (X)
CH-1/-2 PB IN (G)
CH-2 PB IN (X)
+9V OUT
+5V OUT
-5V OUT
RF C IN (X)
RF C IN (G)
C SWP IN
H:METAL IN
H:PLAY IN
H:VS IN
H:FF/REW IN
AU RF-M OUT (X) OUT
+4.5V OUT
AU-99/-99P
-12V IN
+12V IN
METER OUT
M-CONT IN
LED +5V OUT
LED GND
NR SW OUT (X)
NR SW OUT (G)
CH-1 OUT (X)
CH-2 OUT (X)
CH-3 OUT (X)
CH-4 OUT (X)
SELECT IN (X)
SELECT IN (G)
POWER IND OUT (X)
POWER IND OUT (G)
D900 POWER
AUDIO OUT (X)
AUDIO OUT (G)
AUDIO OUT (Y)
SW-2
CN100 ADV SYNC IN
CN102 VIDEO 1 OUT
CN103 VIDEO 2 OUT
CN101 SC IN
CN26
CN28
CN27
CN-214
S901 75 OHM ON/OFF
SW-255
CN40
VIDEO RF-M IN
AU RF-M IN
+4.5V IN
CN-228 RF MODULE


SW-243
S900
DC-DC CONV
CN30 (CN1)
GND
GND
+12V IN
+12V IN
CN31 (CN2)
-12V OUT
+12V OUT
-5V OUT
+5V OUT
+9V OUT
P.SAVE
PR-104/-104P/-104PM
CN41
ENCODE VIDEO IN (X)
ENCODE VIDEO IN (G)
CN17
DEM'D CTDM IN (X)
DEM'D CTDM IN (G)
C.SWP IN
PB Y REF SYNC IN (X)
PB Y REF SYNC IN (G)
VD IN (X)
VD IN (G)
CN18
Y CLAMP IN
L:POWER SAVE IN
CR IN
BLK IN
CN33
SEL'D Y IN (X)
SEL'D Y IN (G)
H:METAL IN
PB Y OUT
AMP'D Y OUT
DLY'D Y OUT
CN35
CCL IN
H BLK IN
BF IN
LALT IN
L:PLAY IN
L:EXT OUT
CN6
VIDEO 1 OUT (X)
VIDEO 1 OUT (G)
VIDEO 2 OUT (X)
VIDEO 2 OUT (G)
CN5
EXT SC IN (X)
EXT SC IN (G)
CN42
ENCODE VIDEO OUT
ENCODE VIDEO OUT
CN23
VIDEO RF-M OUT
N.C.
CN16
+9V IN
+5V IN
GND
GND
-5V IN
03P/-103PM
CN19
DEM'D CTDM OUT (X)
DEM'D CTDM OUT (G)
C.SWP OUT
PB Y REF SYNC OUT (X)
PB Y REF SYNC OUT (G)
VD OUT (X)
VD OUT (G)
CN20
Y CLAMP OUT
L:POWER SAVE OUT
CR OUT
BLK OUT
CN32
SEL'D Y OUT (X)
SEL'D Y OUT (G)
H:METAL OUT
PB Y IN
AMP'D Y IN
DLY'D Y IN
CN34
CCL OUT
H BLK OUT
BF OUT
LALT OUT
L:PLAY OUT
L:EXT IN
CN21
RF C OUT (X)
RF C OUT (G)
C SWP OUT
H:METAL OUT
H:PLAY OUT
H:V5 IN
H:FF/REW OUT
CN22
+9V IN
+5V IN
GND
GND
-5V IN
DUS-287
(PM ONLY)
CN50
Y IN
GND
Y OUT
SW +9V
SW -5V
AU-99/-99P
CN29
UNREG +12V IN
N.C.
CN3
CH-1 PB IN (X)
CH-1/-2 PB IN (G)
CH-2 PB IN (X)
CN15
+9V OUT
+5V OUT
GND
GND
-5V OUT
CN14
RF C IN (X)
RF C IN (G)
C SWP IN
H:METAL IN
H:PLAY IN
H:V5 IN
H:FF/REW IN
CN13
+9V OUT
+5V OUT
GND
GND
-5V OUT
CN12
AU RF-M OUT (X) OUT
GND
+4.5V OUT
CN8
GND
GND
-12V IN
-12V IN
+12V IN
+12V IN
-5V IN
+5V IN
+5V IN
+9V IN
+9V IN
N.C.
CN9
METER OUT
M-CONT IN
LED +5V OUT
LED GND
NR SW OUT (X)
NR SW OUT (G)
CN10
CH-1 OUT (X)
CH-2 OUT (X)
CN37
CH-3 OUT (X)
CH-4 OUT (X)
SELECT IN (X)
SELECT IN (G)
CN11
POWER IND OUT (X)
POWER IND OUT (G)
D900
POWER
CN7
AUDIO OUT (X)
AUDIO OUT (G)
AUDIO OUT (Y)
CN902
AUDIO OUT
SW-235
CN24
METER IN
M-CONT OUT
LED +5V IN
LED GND
M (+) OUT
LED OUT
GND
MT-42
M (+) IN
LED IN
GND
METER (+)
METER (-)
ME100
AUDIO PB LEVEL/BATT METER
SW-244
NR SW IN (X)
NR SW IN (G)
SW-234
CN25
CH-1 IN (X)
CH-2 IN (X)
CN36
CH-3 IN (X)
CH-4 IN (X)
SELECT OUT (X)
SELECT OUT (G)
900-9
900-10
900-3
900-4
900-5
901-1
21-1
21-2
21-3
21-4
21-5
21-6
21-7
22-1
22-2
22-3
22-4
22-5
40-1
40-2
40-3
28-1
28-2
28-3
28-4
27-1
27-2
14-1
14-2
14-3
14-4
14-5
14-6
14-7
13-1
13-2
13-3
13-4
13-5

FRAME
VA-500
VA-500P
VA-500PM

SECTION 8
PRINTED CIRCUIT BOARDS

The circuit information is provided below.

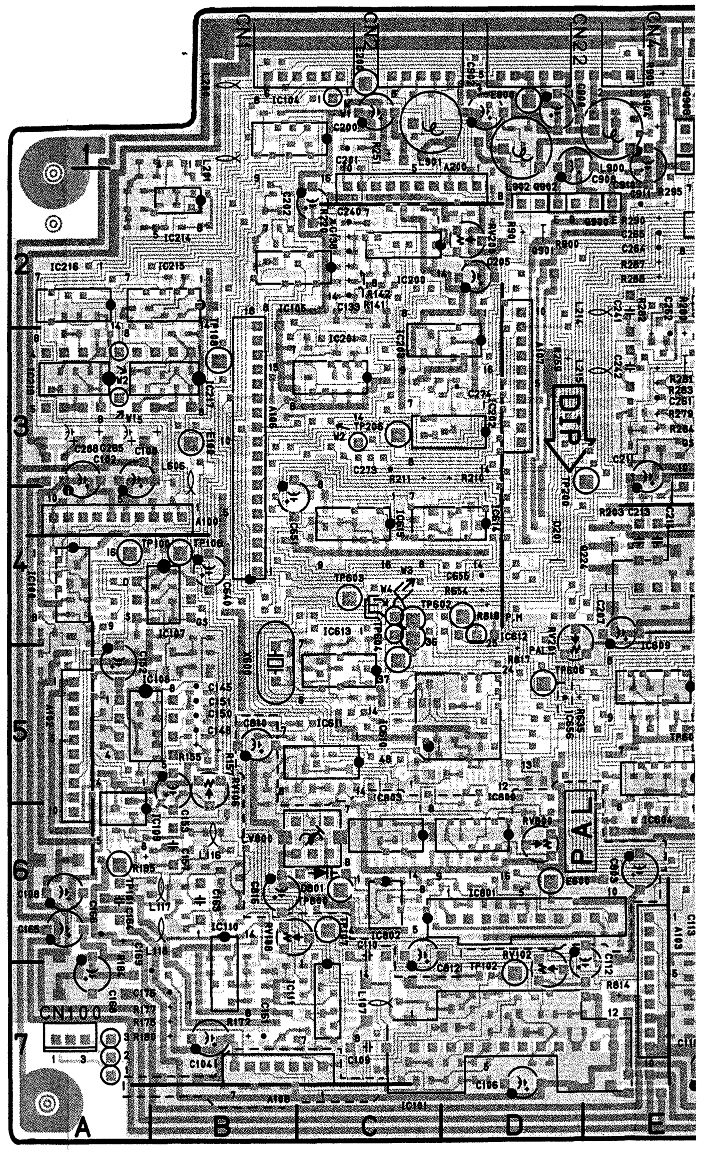
System	Board	Circuit function
VIDEO	PR-103/P	Video RF Demodulator
	DL-19	CCD 1H Delay Line
	DM-64	Limiter
	DUS-194	Switch (For PAL)
	EQ-21	Phase Equalizer
	EQ-21A	Phase Equalizer
	FL-67	Frequency Compensator (For PAL)
	FM-13	Field Memory
	PA-72	RF Amp
	PA-72A	RF Amp
	TG-37	Timing Generator
	VA-69	Video Amp and Switcher
	PR-104/P	CTDM Expander and Chroma Encode, Y/C Mix
	DL-18	Chroma 1/2H Delay Line
	DL-18A	Chroma 1H Delay Line
	NR-27/A	Noise Reduction
AUDIO	AU-99/P	Audio System
OTHERS	CN-214	BNC Relay Board
	CN-228	RF Modulator Connection Board
	MT-42	Audio Mix Meter
	SW-234	Audio Monitor Select Switch
	SW-235	Audio Mix Switch
	SW-243	Power Switch Control
	SW-244	DOLBY ON/OFF Switch
	SW-255	75 ohm Terminate Switch
	DC-DC CONV.	DC-DC Converter

PR-103/-103P 1-623-986-14

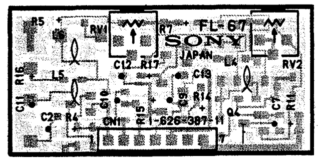
CN1	B - 1C
	B - 1S
CN2	C - 1C
	C - 1S
CN4	E - 1C
	E - 1S
CN19	H - 1C
	H - 1S
CN20	E - 1S
	F - 1C
CN21	G - 1C
	G - 1S
CN22	D - 1C
	D - 1S
CN32	I - 1C
	I - 1S
CN34	F - 1C
	F - 1S
CN100	A - 7C
	A - 7S
D201	D - 4C
D300	H - 45
D600	G - 5S
D601	F - 5S
D602	C - 4S
D604	C - 4S
D605	F - 5S
D606	D - 4S
D800	D - 6S
D801	C - 6C
D900	E - 1S
E100	B - 3C
	B - 3S
E101	I - 7C
	I - 7S
E200	C - 1C
	C - 1S
E201	I - 1C
	I - 1S
E600	D - 5C
	D - 5S
E900	D - 1C
	D - 1S
FL100	F - 6C
	F - 6S
FL200	H - 3C
	H - 3S
FL300	H - 2C
	H - 2S
IC100	A - 4C
IC101	D - 7C
	D - 7S
IC104	B - 1C
IC105	B - 2C
IC107	B - 4C
	B - 4S
IC108	A - 5C
	A - 5S
IC109	A - 5C
IC110	B - 7C
IC200	C - 2C
IC201	C - 3C
IC202	D - 3C
IC203	C - 3C
IC204	E - 4C
	E - 4S
IC208	E - 3C
	E - 3S
IC209	F - 3C
	F - 3S
IC210	F - 3C
IC211	E - 2C
IC212	F - 2C
IC214	A - 2C
IC215	B - 2C
IC216	A - 2C
IC217	B - 3C
	B - 3S
IC218	A - 3C
	A - 3S
IC303	I - 5C
IC304	I - 4C
IC305	I - 3C
IC306	I - 2C
IC600	H - 5C
	H - 5S
IC601	G - 5C
IC602	G - 5C
IC603	F - 5C
IC604	E - 5C
IC605	H - 5C
	H - 5S
IC606	G - 5C
IC607	F - 5C
IC608	F - 5C
IC609	E - 5C
IC610	C - 5C
IC611	C - 5C
IC612	D - 4C
	D - 4S
IC613	C - 4C
IC614	C - 4C
IC615	C - 4C
IC656	D - 5C
IC800	D - 5C
IC801	D - 6C
	D - 6S
IC802	C - 6C
IC803	C - 6C
LV800	B - 6C
Q100	A - 4S
Q101	C - 7S
Q103	D - 7S
Q105	F - 7S
Q106	E - 7S
Q107	E - 7S
Q108	F - 7S
Q109	F - 7S
Q110	G - 7S
Q112	G - 6S
Q113	H - 6S
Q114	I - 6S
Q115	A - 5S
Q116	B - 5S
Q117	A - 5S
Q118	A - 5S
Q119	A - 5S
Q120	A - 6S
Q121	B - 6S
Q122	B - 6S
Q123	C - 7S
Q124	C - 7S
Q203	C - 3S
Q205	H - 3S
Q206	H - 3S
Q207	G - 3S
Q208	H - 3S
Q209	H - 4S
Q210	H - 2S
Q211	H - 2S
Q212	H - 3S
Q213	G - 2C
Q214	G - 1S
Q216	E - 3S
Q217	F - 3S
Q218	F - 3S
Q219	F - 3S
Q220	F - 3S
Q221	F - 3C
Q222	E - 3C
Q223	E - 3S
Q224	E - 4C
Q300	I - 2S
Q301	H - 2C
Q302	H - 1S
Q303	G - 4S
Q304	H - 4S
Q306	I - 6S
Q307	I - 5S
Q308	I - 4S
Q309	I - 4S
Q310	I - 1S
Q600	G - 6S
Q601	E - 5S
Q602	C - 5S
Q603	C - 5S
Q605	C - 5S
Q606	D - 5S
Q800	B - 5S
Q801	C - 5S
Q900	D - 2C
	D - 2S
Q901	D - 2C
Q902	D - 2C
	D - 2S
Q903	E - 1C
Q904	E - 1C
	E - 1S
RV102	C - 7C
	C - 7S
RV103	H - 7C
	H - 7S
RV104	H - 6C
	H - 6S
RV106	B - 5C
	B - 5S
RV108	B - 6C
	B - 6S
RV200	D - 2C
	D - 2S
RV201	D - 4C
	D - 4S
RV202	G - 2C
	G - 2S
RV203	F - 2C
	F - 2S
RV204	F - 2C
	F - 2S
RV206	F - 2C
	F - 2S
RV300	H - 2C
	H - 2S
RV308	I - 6C
	I - 6S
RV309	I - 5C
	I - 5S
RV310	I - 4C
	I - 4S
RV600	E - 5C
	E - 5S
RV601	E - 5C
	E - 5S
RV800	D - 6C
	D - 6S
TP100	A - 4C
	A - 4S
TP101	A - 5C
	A - 5S
TP102	D - 7C
	D - 7S
TP103	F - 7C
	F - 7S
TP104	H - 7C
	H - 7S
TP105	1 - 7C
	1 - 7S
TP106	B - 4C
	B - 4S
TP107	B - 6S
	C - 6C
TP108	B - 3C
	B - 3S
TP200	D - 3C
	D - 3S
TP201	F - 3C
	F - 3S
TP202	E - 4C
	E - 4S
TP203	I - 4C
	I - 4S
TP204	F - 1C
	F - 1S
TP205	I - 1C
	I - 1S
TP206	C - 3C
	C - 3S
TP207	F - 2C
	F - 2S
TP300	I - 7C
	I - 7S
TP307	I - 5C
	I - 5S
TP308	I - 4C
	I - 4S
TP309	I - 1C
	I - 1S
TP600	H - 5C
	H - 5S
TP601	E - 5C
	E - 5S
TP602	D - 4C
	D - 4S
TP603	C - 4C
	C - 4S
TP604	C - 5C
	C - 5S
TP605	F - 4C
	F - 4S
TP606	D - 5C
	D - 5S
TP800	C - 6C
	C - 6S
X600	B - 5C

C; COMPONENT SIDE
S; SOLDERING SIDE

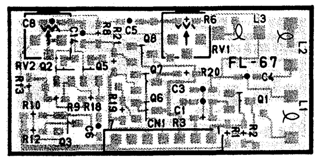
PR-103/-103P; VIDEO RF DEMODULATOR
DL-19; CCD 1H DELAY LINE
DM-64; LIMITER
DUS-194; SWITCH
EQ-21/A; PHASE EQUALIZER
FL-67; FILTER
FM-13; FIELD MEMORY
PA-72/A; RF AMP
TG-37; TIMING GENERATOR
VA-69; VIDEO AMP AND SWITCHER



EK : S/N Up to 10410

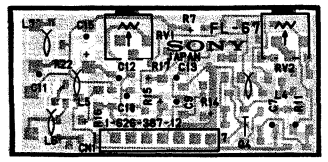


FL-67 – COMPONENT SIDE –
1-626-387-11 (1)
VA-500P

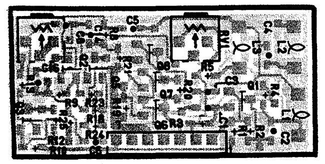


FL-67 – SOLDERING SIDE –
1-626-387-11 (1)
VA-500P

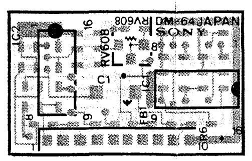
EK : S/N 10411 and Higher



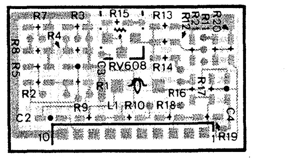
FL-67 – COMPONENT SIDE –
1-626-387-12 (1)
VA-500P



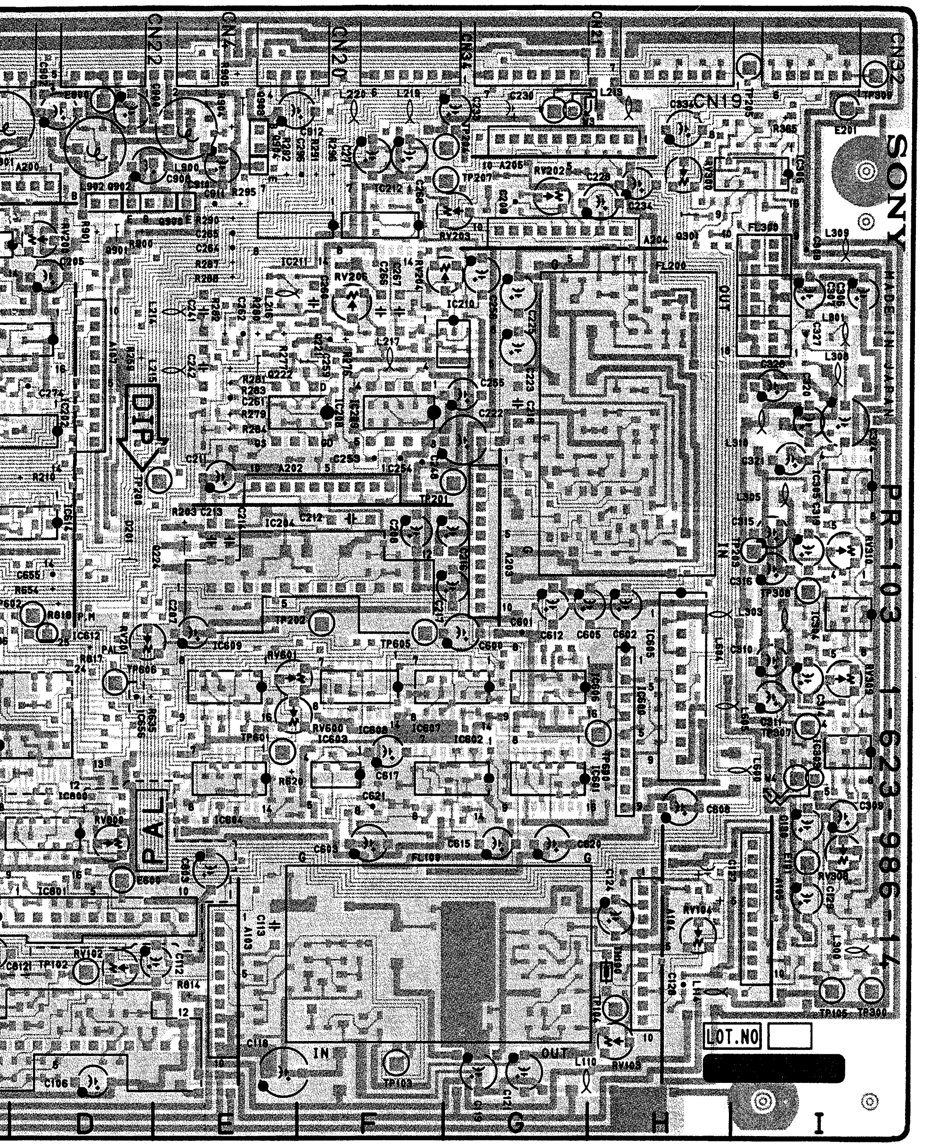
FL-67 – SOLDERING SIDE –
1-626-387-12 (1)
VA-500P



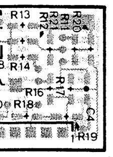
DM-64 – COMPONENT SIDE –
1-623-996-11 (1)
VA-500
VA-500P



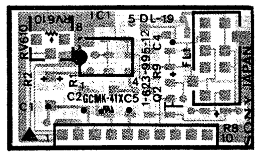
DM-64 – SOLDERING SIDE –
1-623-996-11 (1)
VA-500
VA-500P



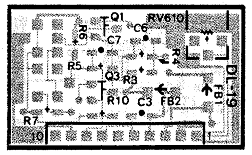
PR-103/-103P – COMPONENT SIDE –
1-623-986-14 (3)
VA-500
VA-500P



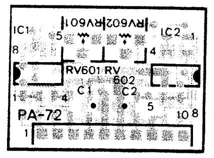
OLDERING SIDE –



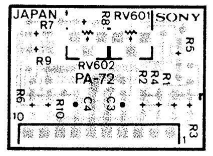
DL-19 – COMPONENT SIDE –
1-623-995-12 (2)
VA-500
VA-500P



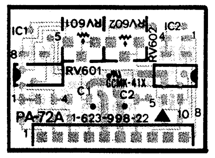
DL-19 – SOLDERING SIDE –
1-623-995-12 (2)
VA-500
VA-500P



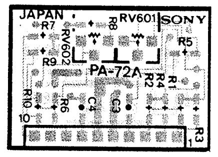
PA-72 – COMPONENT SIDE –
1-623-998-11 (1)
VA-500
VA-500P



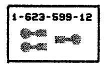
PA-72 – SOLDERING SIDE –
1-623-998-11 (1)
VA-500
VA-500P



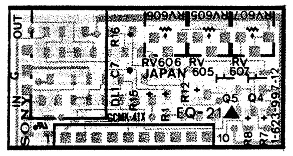
PA-72A – COMPONENT SIDE –
1-623-998-22 (2)
VA-500
VA-500P



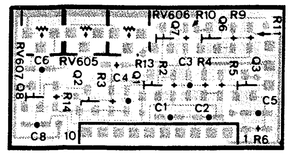
PA-72A – SOLDERING SIDE –
1-623-998-22 (2).
VA-500
VA-500P



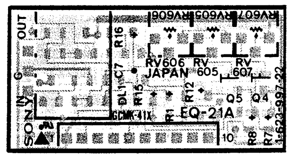
DUS-194 – COMPONENT SIDE –
1-623-599-12 (1)
VA-500P



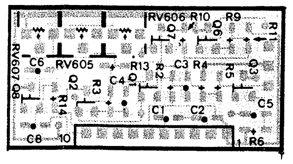
EQ-21 – COMPONENT SIDE –
1-623-997-12 (2)
VA-500
VA-500P



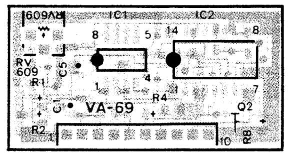
EQ-21 – SOLDERING SIDE –
1-623-997-12 (2)
VA-500
VA-500P



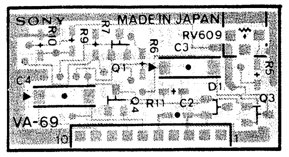
EQ-21A – COMPONENT SIDE –
1-623-997-22 (2)
VA-500
VA-500P



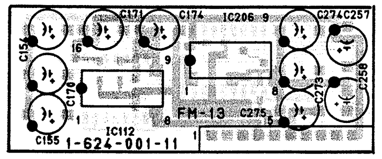
EQ-21A – SOLDERING SIDE –
1-623-997-22 (2)
VA-500
VA-500P



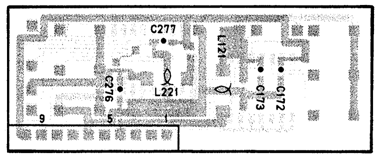
VA-69 – COMPONENT SIDE –
1-623-999-11 (1)
VA-500
VA-500P



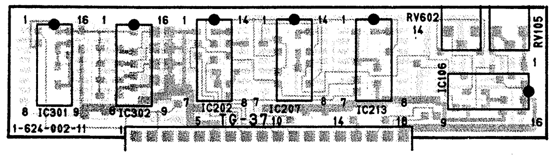
VA-69 – SOLDERING SIDE –
1-623-999-11 (1)
VA-500
VA-500P



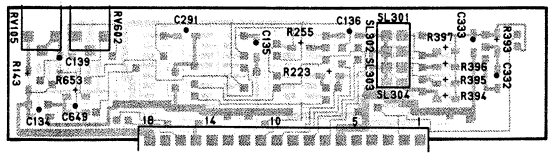
FM-13 – COMPONENT SIDE –
1-624-001-11 (1)
VA-500
VA-500P



FM-13 – SOLDERING SIDE –
1-624-001-11 (1)
VA-500
VA-500P

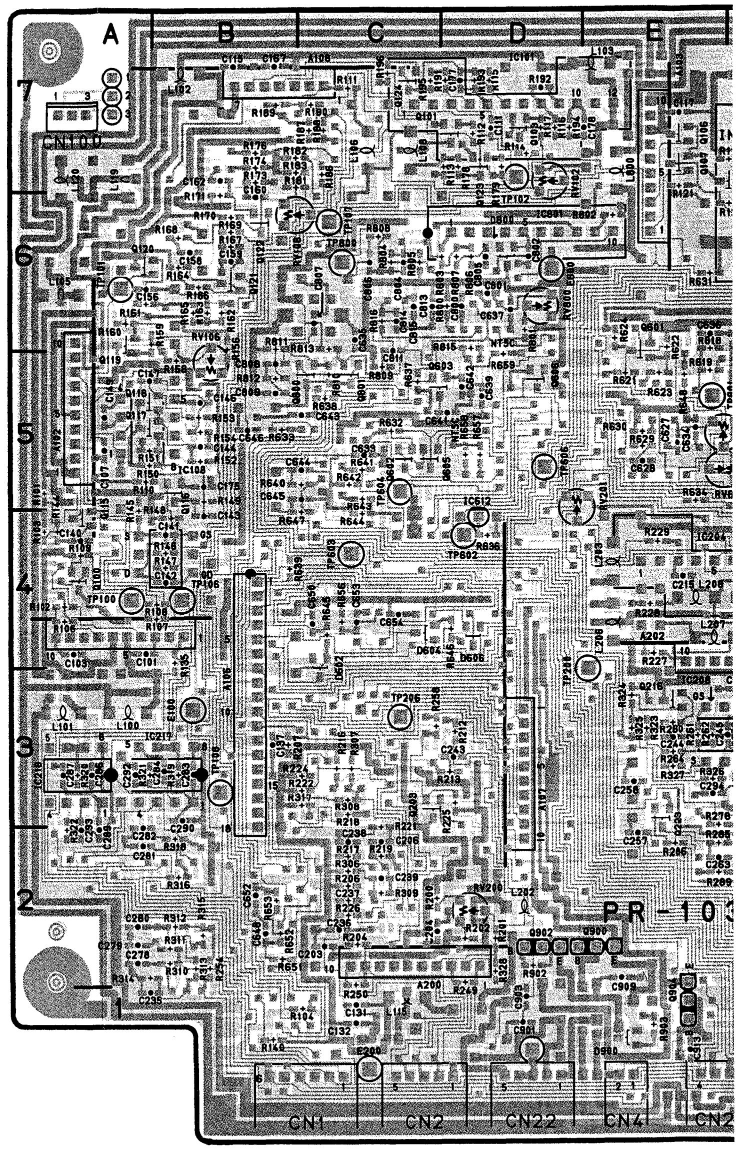


TG-37 – COMPONENT SIDE –
1-624-002-11 (1)
VA-500
VA-500P

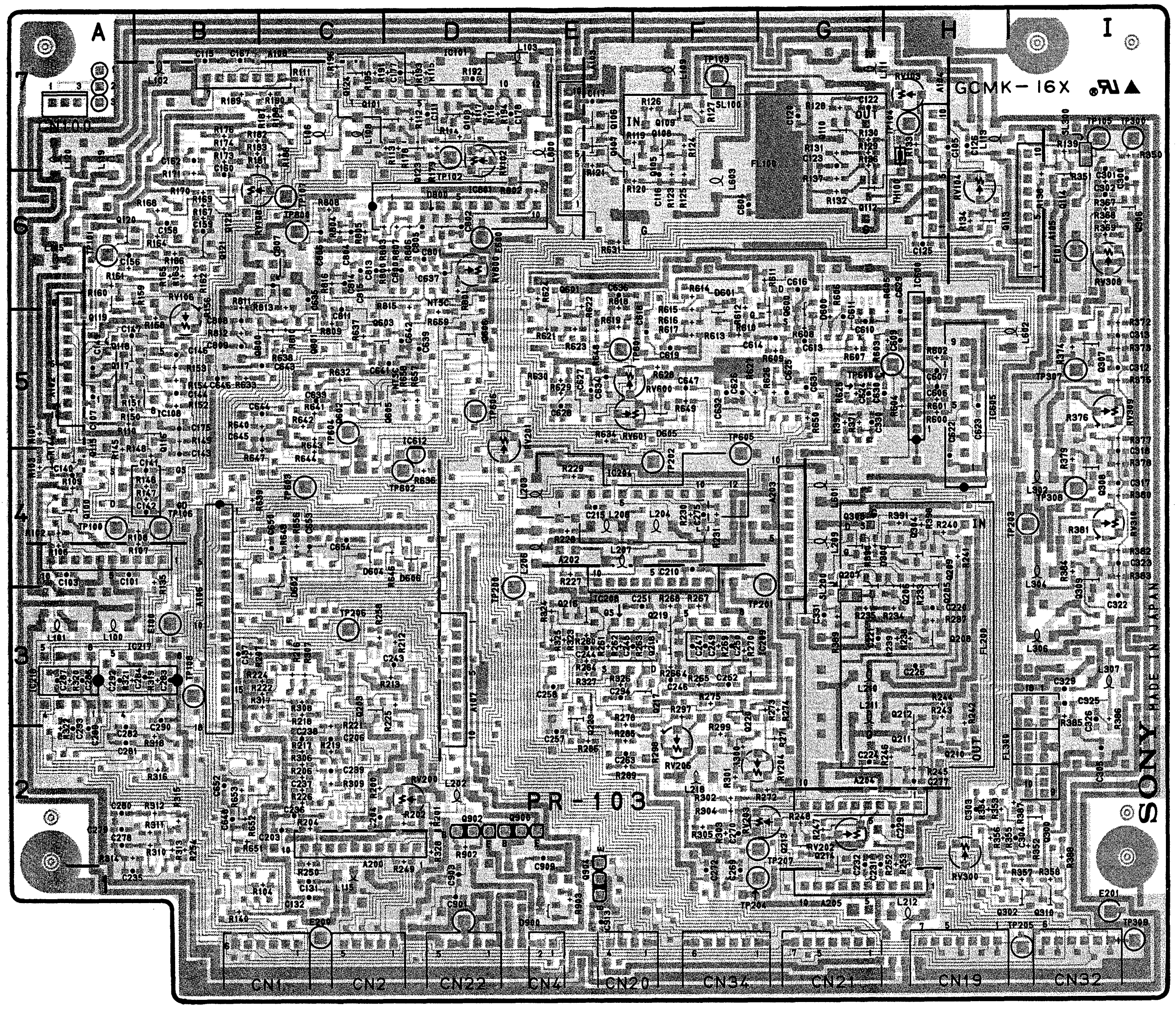


TG-37 – SOLDERING SIDE –
1-624-002-11 (1)
VA-500
VA-500P

PR-103/-103P; VIDEO RF DEMODULATOR


A
B
C
D
E
7
6
5
4
3
2
1
CN100
PR-103
CN1
CN2
CN22
CN4

PR-103/-103P; VIDEO RF DEMODULATOR


A
B
C
D
E
F
G
H
I
7
6
5
4
3
2
1
GOMK-16X
PR-103
SONY
MADE IN JAPAN
CN1
CN2
CN22
CN4
CN20
CN34
CN21
CN19
CN32

PR-103/-103P — SOLDERING SIDE —
1-623-986-14 (3)
VA-500
VA-500P

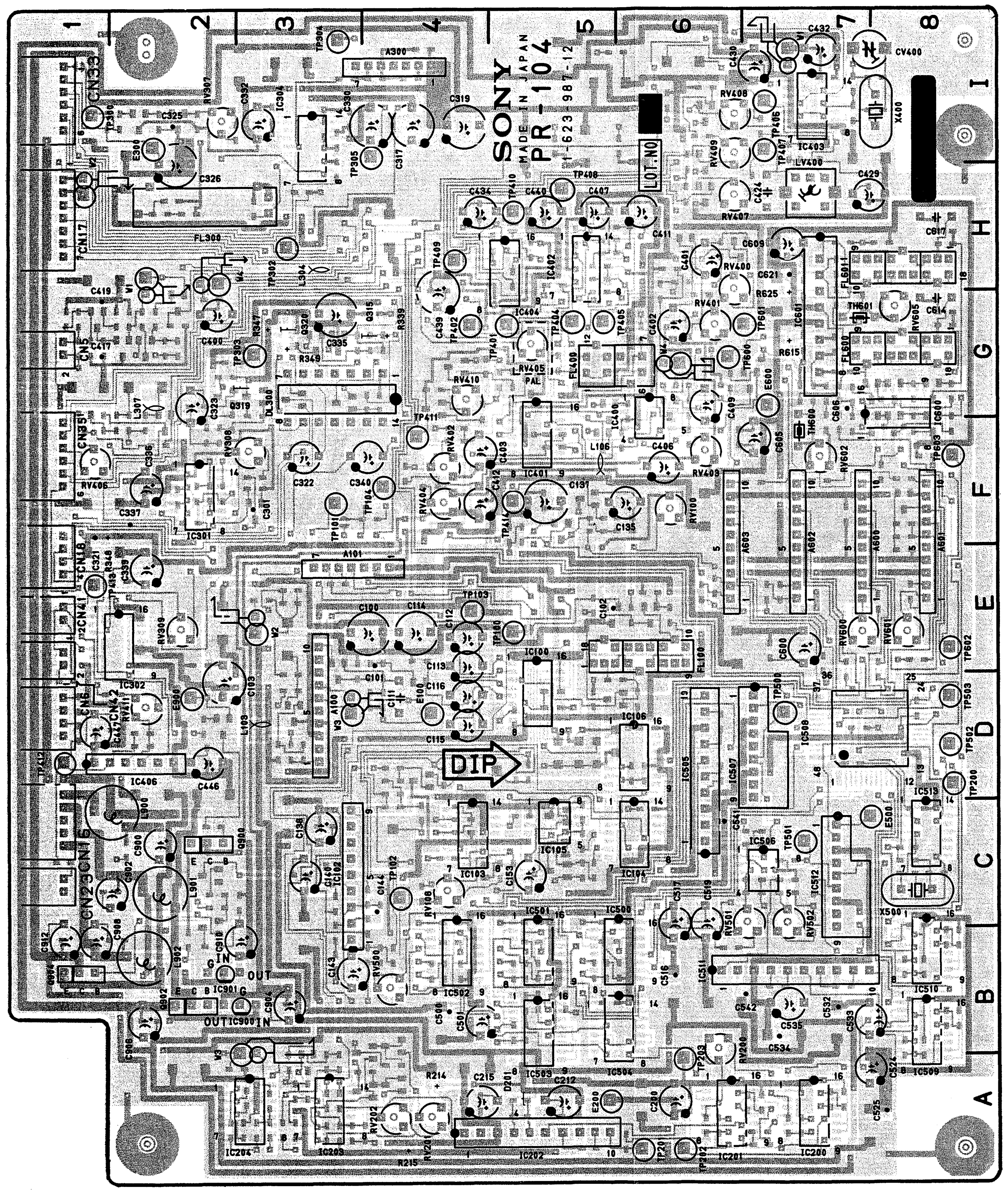
PR-104/-104P; CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
DL-18; CHROMA 1/2H DELAY LINE
DL-18A; CHROMA 1H DELAY LINE
NR-27/-27A; NOISE REDUCTION

J : S/N Up to 10675
UC : S/N Up to 11371
EK : S/N Up to 11345

PR-104/-104P 1-623-987-12

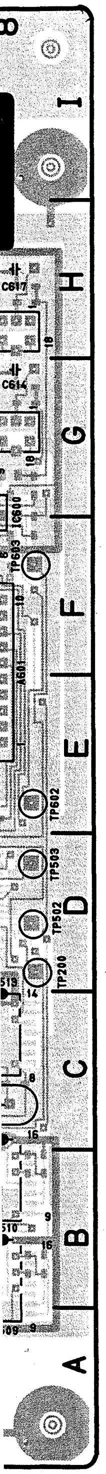
CN5	G - 1C G - 1S
CN6	D - 1C D - 1S
CN16	C - 1C C - 1S
CN17	H - 1C H - 1S
CN18	E - 1C E - 1S
CN23	C - 1C C - 1S
CN33	I - 1C I - 1S
CN35	F - 1C F - 1S
CN41	E - 1C E - 1S
CN42	E - 1C E - 1S
CV400	I - 8C
D100	C - 3S
D101	C - 5S
D102	C - 5S
D103	C - 4S
D200	A - 3S
D201	A - 5C
D400	G - 2S
D900	C - 2S
DL300	G - 3C F - 3S
E100	D - 4C D - 4S
E200	A - 5C A - 5S
E300	I - 2C I - 2S
E500	C - 8C C - 8S
E600	G - 7C G - 7S
E900	D - 2C D - 2S
FL100	E - 6C E - 6S
FL300	H - 2C H - 2S
FL400	G - 5C G - 5S
FL600	G - 8C G - 8S
FL601	H - 8C H - 8S
IC100	D - 5C
IC102	C - 3C C - 3S
IC103	C - 4C
IC104	C - 6C
IC105	C - 5C
IC106	D - 6C
IC200	A - 7C
IC201	A - 6C
IC202	A - 5C A - 5S
IC203	A - 3C
IC204	A - 3C
IC301	F - 2C
IC302	E - 2C
IC304	I - 3C
IC400	G - 6C
IC401	F - 5C
IC402	H - 5C
IC403	I - 7C
IC404	H - 5C
IC406	D - 2C D - 2S
IC500	B - 6C
IC501	B - 5C
IC502	B - 4C
IC503	B - 5C
IC504	B - 6C
IC505	D - 6C D - 6S
IC506	C - 7C
IC507	D - 7C D - 7S
IC508	D - 7C
IC509	B - 8C
IC510	B - 8C
IC511	B - 7C B - 7S
IC512	C - 7C C - 7S
IC513	C - 8C
IC600	G - 8C
IC601	G - 7C G - 7S
IC900	B - 3C B - 3S
IC901	B - 2C B - 2S
LV400	H - 7C
Q100	D - 3S
Q101	E - 3S
Q102	D - 4S
Q103	D - 5S
Q104	E - 6S
Q105	E - 5S
Q119	F - 5S
Q120	F - 5S
Q121	D - 4S
Q122	C - 5S
Q200	A - 4S
Q201	B - 4S
Q202	A - 4S
Q203	B - 4S
Q313	G - 3S
Q314	G - 3S
Q315	G - 4C
Q316	F - 3S
Q317	G - 3S
Q318	G - 2S
Q319	G - 3C
Q320	G - 3C
Q321	G - 3S
Q322	F - 3S
Q323	I - 2S
Q324	I - 2S
Q400	H - 6S
Q401	H - 6S
Q402	G - 5S
Q403	G - 7S
Q404	G - 6S
Q405	F - 5S
Q406	G - 1S
Q407	G - 2S
Q408	G - 1S
Q409	G - 2S
Q410	G - 2S
Q411	I - 7S
Q412	H - 6S
Q413	I - 6S
Q414	H - 6S
Q415	G - 5S
Q416	G - 4S
Q417	G - 4S
Q600	F - 8S
Q601	F - 8S
Q602	F - 8S
Q603	F - 8S
Q604	G - 8S
Q605	G - 8S
Q606	G - 8S
Q900	C - 2C C - 2S
Q901	D - 2S
Q902	B - 2C B - 2S
Q903	B - 2S
Q904	B - 1C B - 1S
RV100	F - 6C F - 6S
RV108	C - 4C C - 4S
RV200	B - 6C B - 6S
RV201	A - 4C A - 4S
RV202	A - 4C A - 4S
RV307	I - 2C I - 2S
RV308	F - 3C F - 3S
RV309	E - 2C E - 2S
RV400	H - 6C H - 6S
RV401	G - 6C G - 6S
RV402	F - 4C F - 4S
RV403	F - 6C F - 6S
RV404	F - 4C F - 4S
RV405	G - 5C G - 5S
RV406	F - 1C F - 1S
RV407	H - 6C H - 6S
RV408	I - 6C I - 6S
RV409	I - 6C I - 6S
RV410	G - 4C G - 4S
RV411	D - 2C D - 2S
RV500	B - 4C B - 4S
RV501	C - 7C C - 7S
RV502	C - 7C C - 7S
RV600	E - 7C E - 7S
RV601	E - 8C E - 8S
RV602	F - 7C F - 7S
RV605	G - 8C G - 8S
TP100	E - 5C E - 5S
TP101	F - 3C F - 3S
TP102	C - 4C C - 4S
TP103	E - 4C E - 4S
TP104	F - 4C F - 4S
TP200	D - 8C D - 8S
TP201	A - 6C A - 6S
TP202	A - 6C A - 6S
TP203	A - 6C A - 6S
TP300	I - 1C I - 1S
TP302	H - 3C H - 3S
TP303	G - 3C G - 3S
TP304	I - 3C I - 3S
TP305	I - 4C I - 4S
TP401	G - 5C G - 5S
TP402	G - 4C G - 4S
TP404	G - 5C G - 5S
TP405	G - 5C G - 5S
TP406	I - 7C I - 7S
TP407	I - 7C I - 7S
TP408	H - 5C H - 5S
TP409	H - 4C H - 4S
TP410	H - 5C H - 5S
TP411	F - 4C F - 4S
TP412	D - 1C D - 1S
TP413	E - 1C E - 1S
TP414	F - 5C F - 5S
TP500	D - 7C D - 7S
TP501	C - 7C C - 7S
TP502	D - 8C D - 8S
TP503	D - 8C D - 8S
TP600	G - 6C G - 6S
TP601	G - 7C G - 7S
TP602	E - 8C E - 8S
TP603	F - 8C F - 8S
X400	I - 8C
X500	C - 8C

C; COMPONENT SIDE
S; SOLDERING SIDE

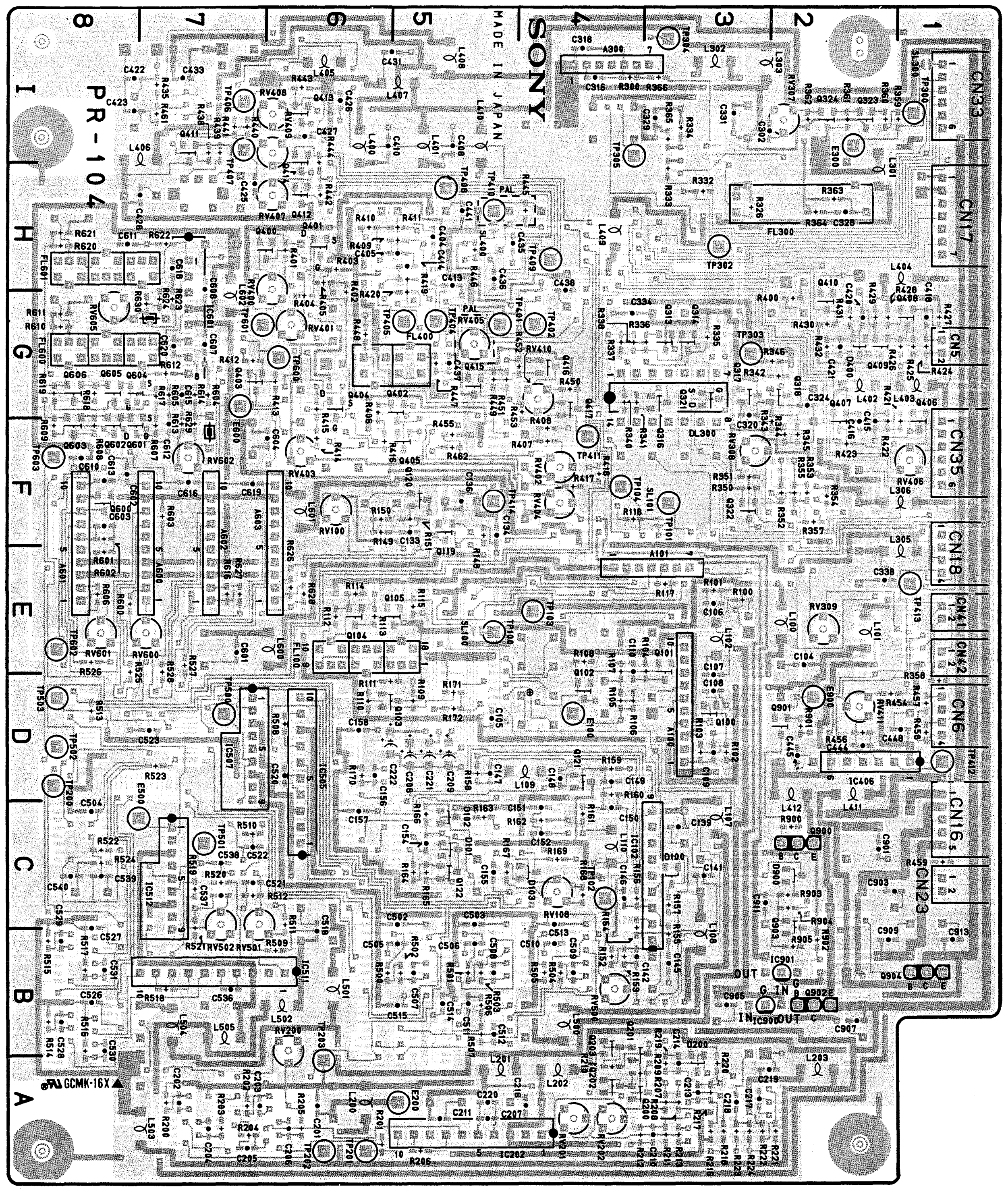


PR-104/-104P — COMPONENT SIDE —
1-623-987-12 (2)
VA-500
VA-500P

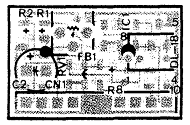
0675
1371
1345



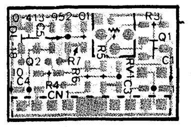
NT SIDE –


PR-104
SONY
MADE IN JAPAN
CN33
CN17
CN5
CN35
CN18
CN41
CN42
CN6
CN16
CN23

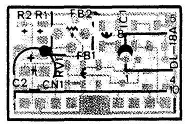
PR-104/-104P – SOLDERING SIDE –
1-623-987-12 (2)
VA-500
VA-500P



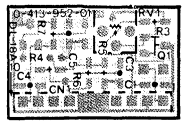
DL-18 – COMPONENT SIDE –
1-623-994-11 (1)
VA-500
VA-500P



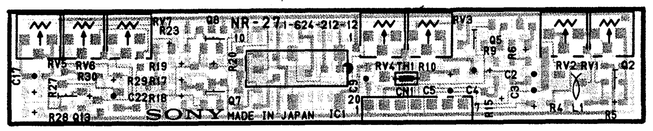
DL-18 – SOLDERING SIDE –
1-623-994-11 (1)
VA-500
VA-500P



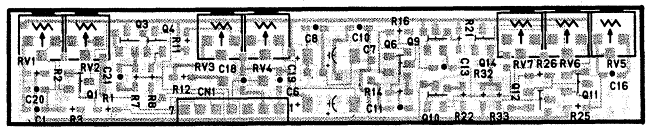
DL-18A – COMPONENT SIDE –
1-623-994-21 (1)
VA-500
VA-500P



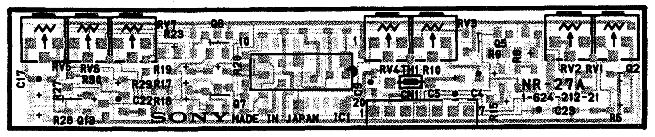
DL-18A – SOLDERING SIDE –
1-623-994-21 (1)
VA-500
VA-500P



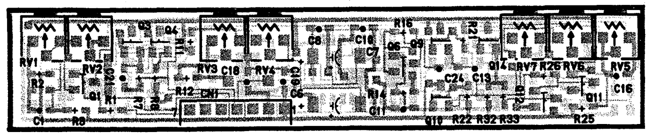
NR-27 – COMPONENT SIDE –
1-624-212-12 (2)
VA-500 (NR-27)
VA-500P (NR-27A)



NR-27 – SOLDERING SIDE –
1-624-212-12 (2)
VA-500 (NR-27)
VA-500P (NR-27A)



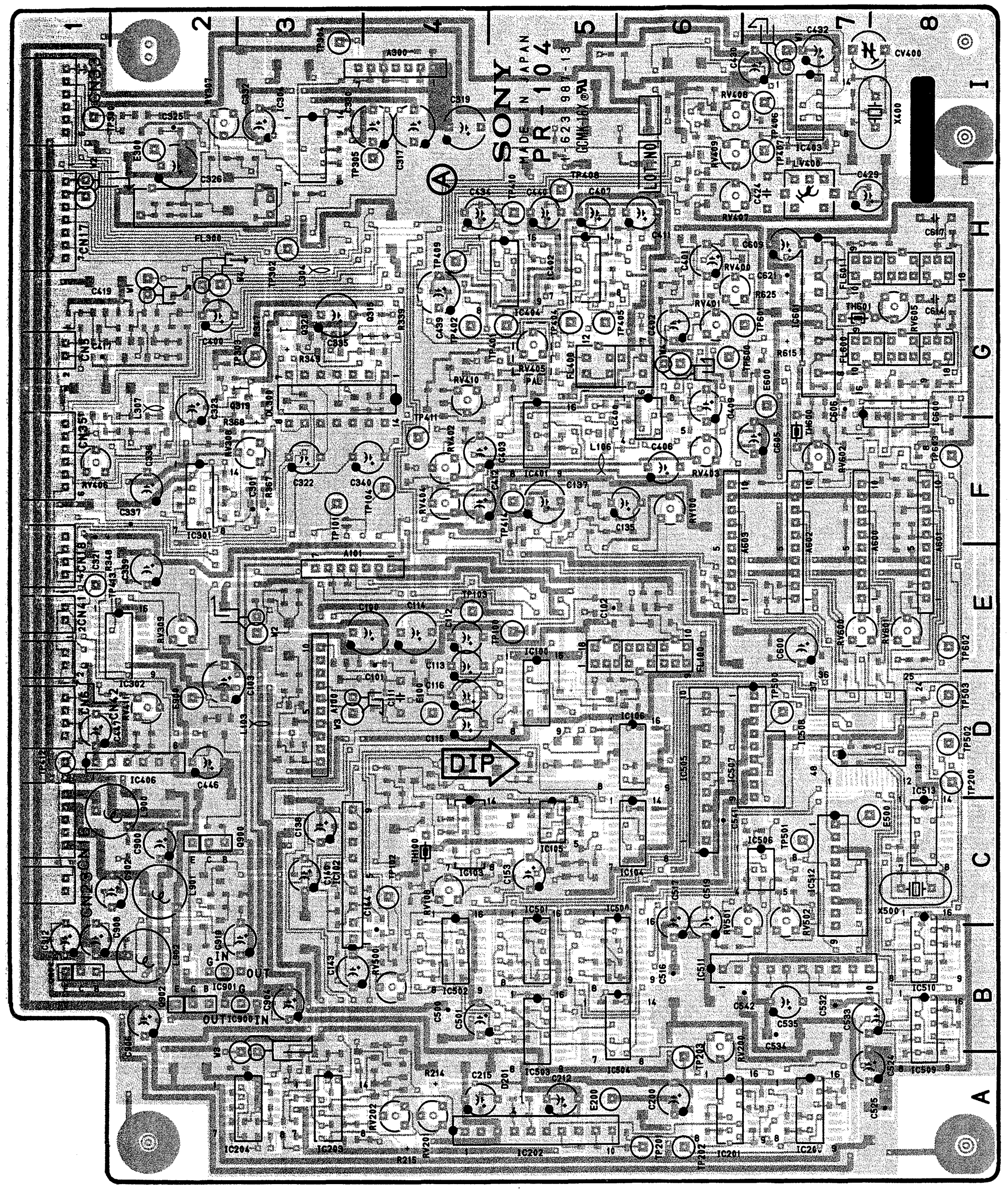
NR-27A – COMPONENT SIDE –
1-624-212-21 (1)
VA-500P



NR-27A – SOLDERING SIDE –
1-624-212-21 (1)
VA-500P

PR-104/-104P; CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX

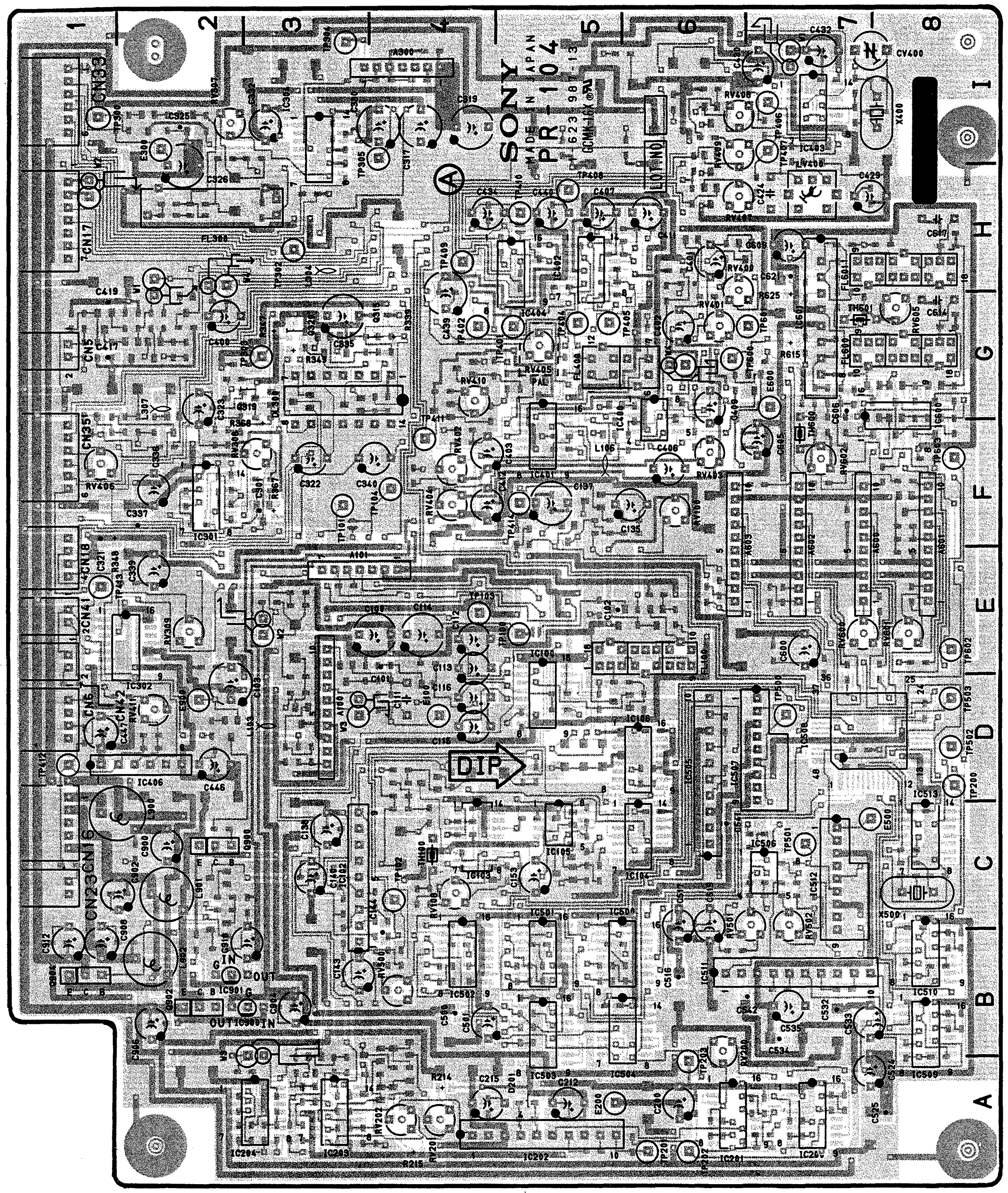
J : S/N 10676 and Higher
UC : S/N 11372 and Higher
EK : S/N 11346 and Higher


1
2
3
4
5
6
7
8
I
H
G
F
E
D
C
B
A
SONY
PR-104
MADE IN JAPAN
DIP

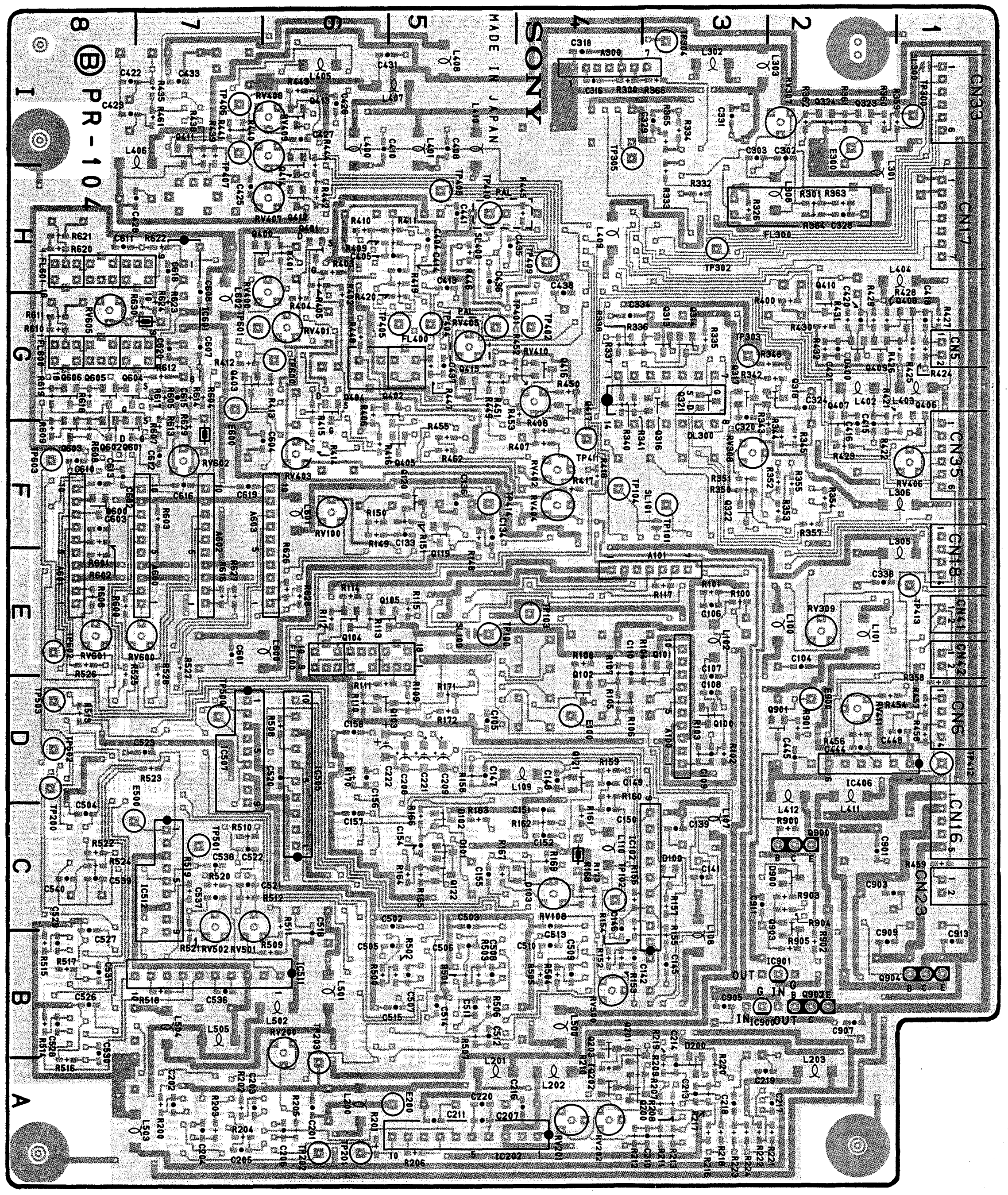
PR-104/-104P – COMPONENT SIDE –
1-623-987-13 (1)
VA-500
VA-500P

PR-104/-104P; CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX

J : S/N 10676 and Higher
UC : S/N 11372 and Higher
EK : S/N 11346 and Higher


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
SONY
PR-104
MADE IN JAPAN
DIP
CN33
CN17
CN5
CN35
CN18
CN23
CN16

PR-104/-104P – COMPONENT SIDE –
1-623-987-13 (1)
VA-500
VA-500P


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
SONY
MADE IN JAPAN
PR-104
CN33
CN17
CN5
CN35
CN18
CN16
CN23

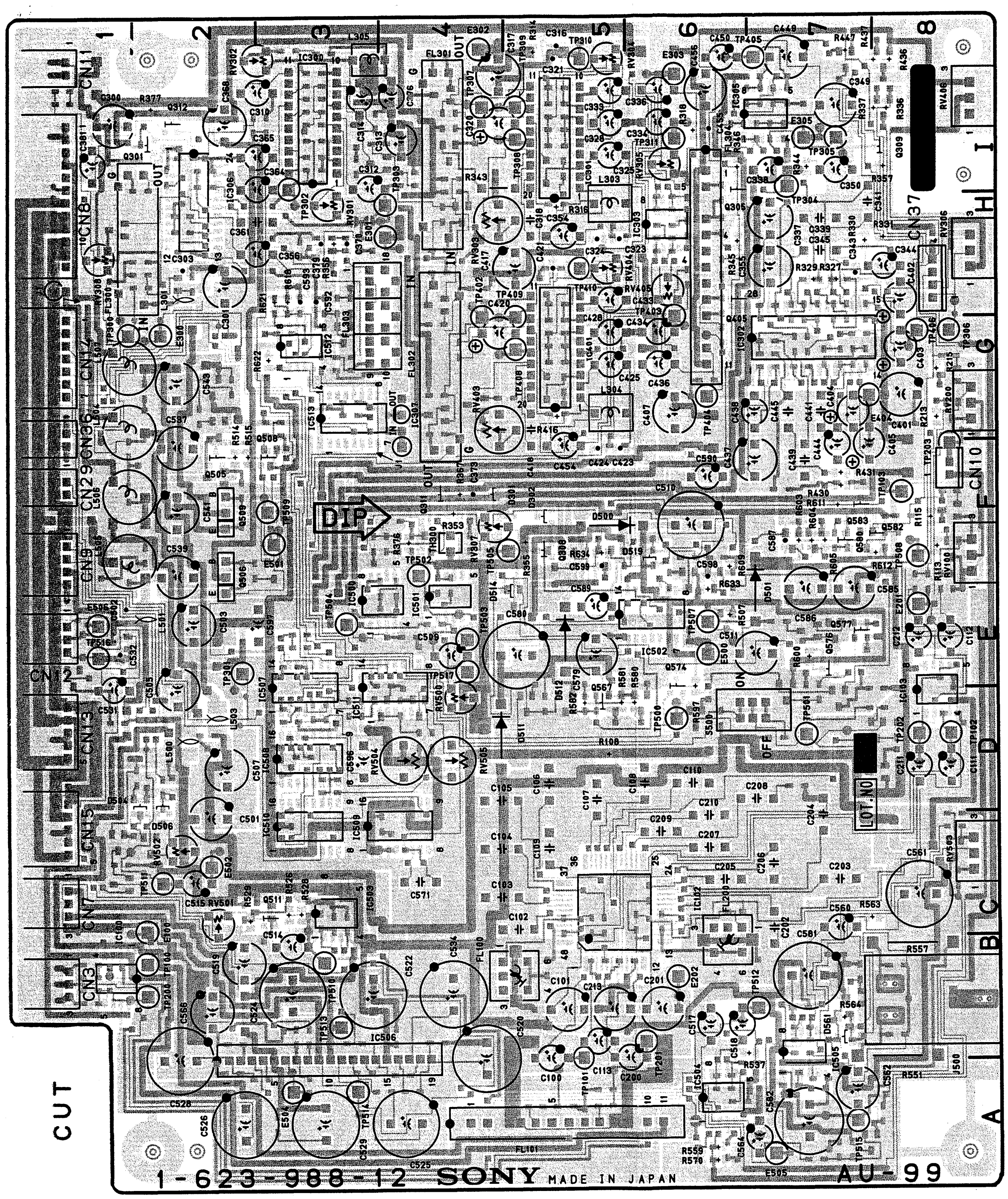
PR-104/-104P – SOLDERING SIDE –
1-623-987-13 (1)
VA-500
VA-500P

AU-99/-99P 1-623-988-12

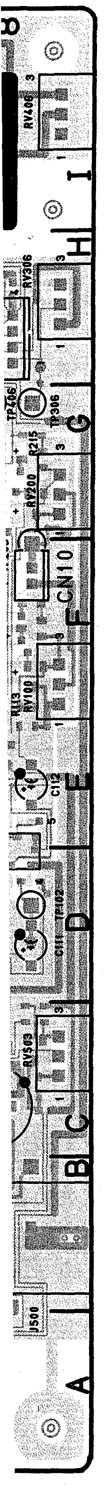
CN3	B - 1C B - 1S
CN7	C - 1C C - 1S
CN8	I - 1C I - 1S
CN9	F - 1C F - 1S
CN10	F - 8C F - 8S
CN11	I - 1C I - 1S
CN12	E - 1C E - 1S
CN13	D - 1C D - 1S
CN14	G - 1C G - 1S
CN15	C - 1C C - 1S
CN29	F - 1C F - 1S
CN36	G - 1C G - 1S
CN37	H - 8S
D100	D - 7S
D300	I - 4S
D301	F - 4C
D302	F - 5C
D400	G - 4S
D500	F - 5C F - 5S
D501	E - 7C E - 7S
D502	F - 2S
D503	G - 2S
D504	D - 2C
D505	C - 2S
D506	D - 2C
D507	E - 1S
D508	C - 3S
D510	D - 5S
D511	D - 4C D - 4S
D512	E - 5C E - 5S
D513	E - 5S
D514	E - 5C
D516	E - 7S
D517	F - 7S
D518	E - 7S
D519	F - 6C
D560	B - 7S
D561	B - 7C
E100	C - 2C C - 2S
E201	E - 8C E - 8S
E202	B - 6C B - 6S
E300	G - 2C G - 2S
E301	H - 4C H - 4S
E302	I - 4C I - 4S
E303	I - 6C I - 6S
E305	I - 7C I - 7S
E404	G - 7C G - 7S
E500	E - 6C E - 6S
E501	F - 3C F - 3S
E502	C - 2C C - 2S
E504	A - 3C A - 3S
E505	A - 7C A - 7S
E506	E - 1C E - 1S
FL100	B - 4C
FL101	A - 5C A - 4S
FL200	C - 6C
FL300	H - 1C H - 2S
FL301	I - 4C I - 4S
FL302	G - 4C G - 4S
FL303	H - 3C H - 3S
FL304	I - 6C I - 6S
IC100	B - 1C
IC102	C - 6C
IC103	D - 8C
IC300	I - 3C I - 3S
IC301	I - 5C I - 5S
IC302	G - 7C
IC303	H - 6C
IC305	I - 7C
IC306	I - 2C
IC307	G - 4C G - 4S
IC401	G - 5C G - 5S
IC500	E - 4C
IC501	E - 4C
IC502	E - 6C
IC503	C - 3C
IC504	A - 6C
IC505	B - 7C
IC506	B - 3C B - 3S
IC507	E - 3C
IC508	D - 3C
IC509	C - 4C
IC510	C - 3C
IC511	E - 4C
IC512	G - 3C
IC513	G - 3C
Q100	F - 8S
Q101	F - 8S
Q200	G - 8S
Q201	G - 8S
Q300	H - 2S
Q301	I - 2C
Q302	I - 8S
Q303	H - 4S
Q304	I - 4S
Q305	I - 6C
Q306	H - 3S
Q307	F - 4S
Q308	G - 3C
Q309	I - 8C
Q310	I - 3S
Q311	F - 4C
Q312	I - 2C
Q313	G - 3S
Q402	I - 8S
Q403	H - 4S
Q404	G - 4S
Q405	H - 6C
Q406	I - 7S
Q500	D - 6S
Q502	E - 6S
Q503	E - 6S
Q504	E - 6S
Q505	F - 2C
Q506	E - 2C E - 2S
Q507	E - 3S
Q508	F - 3C
Q509	F - 2C F - 2S
Q510	G - 2S
Q511	C - 3C
Q512	C - 1S
Q513	D - 1S
Q516	E - 1S
Q560	B - 7S
Q561	A - 8S
Q562	C - 1S
Q563	F - 3S
Q564	D - 5S
Q565	D - 5S
Q566	D - 6S
Q567	D - 5C
Q568	F - 5S
Q569	E - 5S
Q570	C - 8S
Q573	D - 7S
Q574	E - 6C
Q575	E - 7S
Q576	E - 7C
Q577	E - 7C
Q578	E - 7S
Q579	F - 7S
Q580	F - 7C
Q581	F - 7S
Q582	F - 8C
Q583	F - 7C
Q584	D - 3S
RV100	F - 8C F - 8S
RV200	G - 8C G - 8S
RV301	H - 3C H - 3S
RV302	I - 2C I - 2S
RV303	H - 4C H - 4S
RV304	I - 5C I - 5S
RV305	I - 6C I - 6S
RV306	H - 8C H - 8S
RV307	F - 4C F - 4S
RV308	H - 1C H - 1S
RV403	G - 5C G - 5S
RV404	H - 5C H - 5S
RV405	H - 6C H - 6S
RV406	I - 8C I - 8S
RV500	D - 4C D - 4S
RV501	C - 2C C - 2S
RV502	C - 2C C - 2S
RV503	C - 8C
RV504	D - 4C D - 4S
RV505	D - 4C D - 4S
S500	D - 6C D - 6S
TP100	B - 2C B - 2S
TP101	B - 5C B - 5S
TP102	D - 8C D - 8S
TP103	F - 8C F - 8S
TP200	B - 2C B - 2S
TP201	B - 6C B - 6S
TP202	D - 8C D - 8S
TP203	F - 8C F - 8S
TP300	G - 1C G - 1S
TP301	E - 2C E - 2S
TP302	I - 3C I - 3S
TP303	H - 4C H - 4S
TP304	I - 7C I - 7S
TP305	I - 7C I - 7S
TP306	G - 8C G - 8S
TP307	I - 4C I - 4S
TP308	I - 5C I - 5S
TP309	I - 5C I - 5S
TP310	I - 5C I - 5S
TP311	I - 6C I - 6S
TP402	H - 4C H - 4S
TP403	H - 6C H - 6S
TP404	G - 6C G - 6S
TP405	I - 7C I - 7S
TP406	G - 8C G - 8S
TP408	G - 5C G - 5S
TP409	H - 5C H - 5S
TP410	H - 5C H - 5S
TP500	D - 6C D - 6S
TP501	D - 7C D - 7S
TP502	E - 4C E - 4S
TP503	E - 4C E - 4S
TP504	E - 3C E - 3S
TP505	F - 4C F - 4S
TP507	E - 6C E - 6S
TP508	F - 8C F - 8S
TP509	F - 3C F - 3S
TP510	B - 3C B - 3S
TP511	C - 2C C - 2S
TP512	B - 7C B - 7S
TP513	B - 3C B - 3S
TP514	A - 3C A - 3S
TP515	A - 7C A - 7S
TP516	E - 1C E - 1S
TP517	E - 4C E - 4S

C; COMPONENT SIDE
S; SOLDERING SIDE

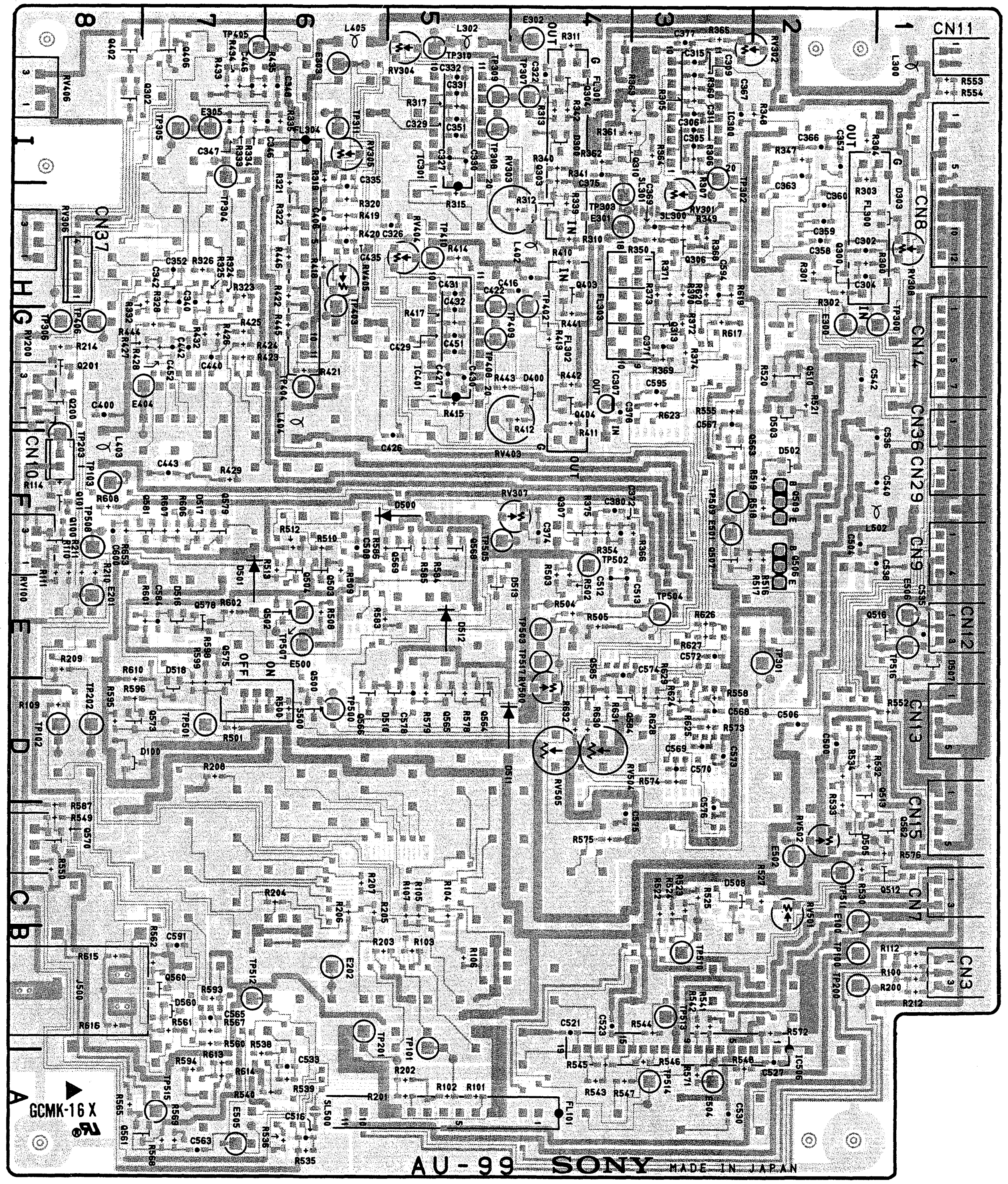
AU-99/-99P; AUDIO SYSTEM



AU-99/-99P — COMPONENT SIDE —
1-623-988-12 (2)
VA-500
VA-500P

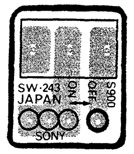


ɾ SIDE —

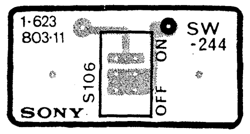

AU-99 SONY MADE IN JAPAN
GCMK-16 X
CN11
CN8
CN14
CN36
CN29
CN9
CN12
CN13
CN15
CN7
CN3
CN37
CN10

AU-99/-99P — SOLDERING SIDE —
1-623-988-12 (2)
VA-500
VA-500P

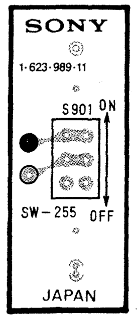
CN-214; BNC RELAY BOARD
CN-228; RF MODULATOR CONNECTION BOARD
MT-42; AUDIO MIX METER
SW-234; AUDIO MONITOR SELECT SWITCH
SW-235; AUDIO MIX SWITCH
SW-243; POWER SWITCH CONTROL
SW-244; DOLBY ON/OFF SWITCH
SW-255; 75Ω TERMINATE SWITCH


SW-243
JAPAN
S900
SONY

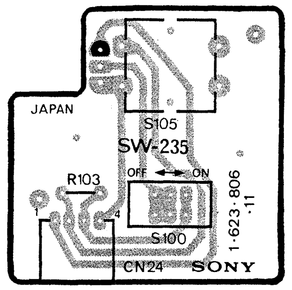
SW-243 — COMPONENT SIDE —
1-623-804-11 (1)
VA-500
VA-500P


1-623
803-11
SW
-244
S106
ON
OFF
SONY

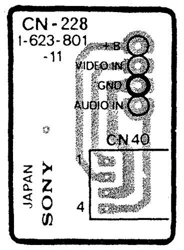
SW-244 — COMPONENT SIDE —
1-623-803-11 (1)
VA-500
VA-500P


SONY
1-623-989-11
S901 ON
SW-255 OFF
JAPAN

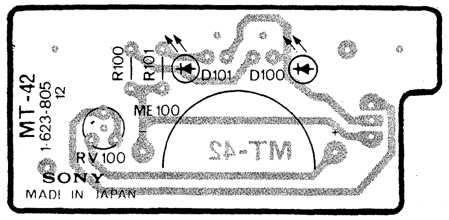
SW-255 — COMPONENT SIDE —
1-623-989-11 (1)
VA-500
VA-500P


JAPAN
S105
SW-235
R103
OFF ON
S100
1-623-806-11
CN24
SONY

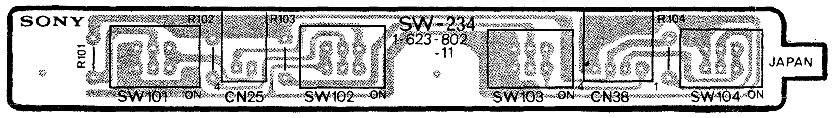
SW-235 — COMPONENT SIDE —
1-623-806-11 (1)
VA-500
VA-500P


CN-228
1-623-801
-11
+B
VIDEO IN
GND
AUDIO IN
CN40
JAPAN
SONY

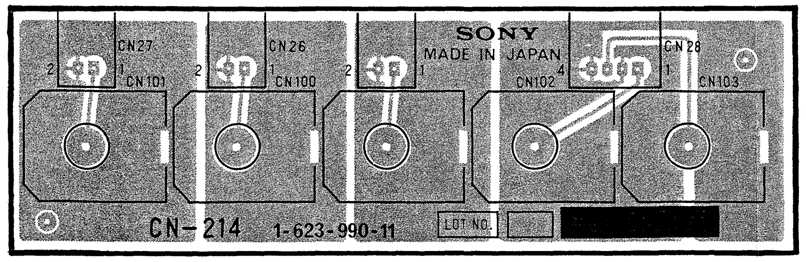
CN-228 — COMPONENT SIDE —
1-623-801-11 (1)
VA-500
VA-500P


MT-42
1-623-805
12
R100
R101
D101
D100
ME100
RV100
SONY
MADE IN JAPAN

MT-42 — COMPONENT SIDE —
1-623-805-12 (1)
VA-500
VA-500P


SONY
R101
R102
R103
SW-234
1-623-802
-11
R104
JAPAN
SW101
ON
CN25
SW102
ON
SW103
ON
CN38
SW104
ON

SW-234 — COMPONENT SIDE —
1-623-802-11 (1)
VA-500
VA-500P


CN27
CN101
CN26
CN100
SONY
MADE IN JAPAN
CN102
CN28
CN103
CN-214
1-623-990-11
LOT NO.

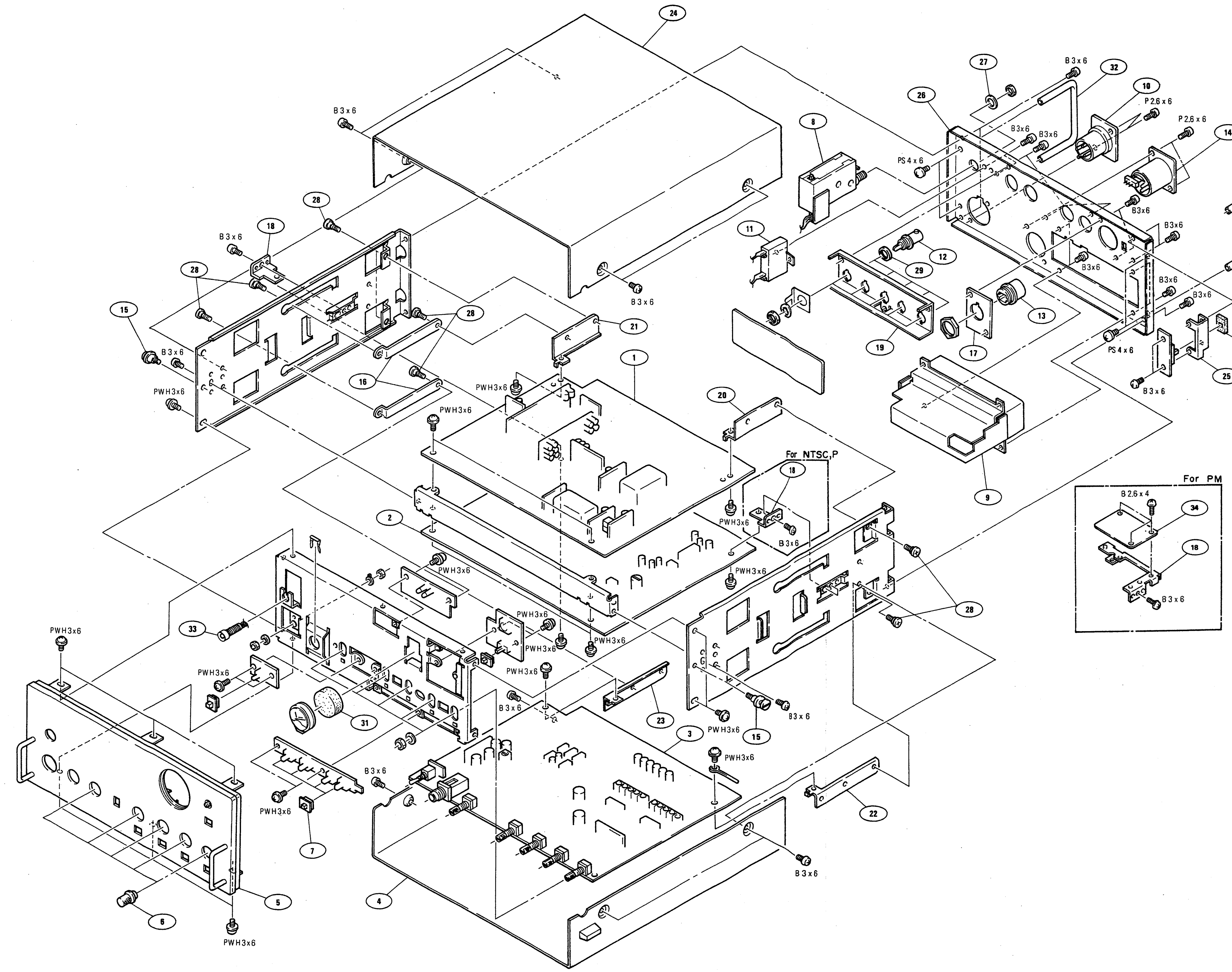
CN-214 — COMPONENT SIDE —
1-623-990-11 (1)
VA-500
VA-500P

SECTION 9
SPARE PARTS

9-1. PARTS INFORMATION

1. **The shaded and ⚠ -marked components are critical to safety. Replace only with the same components as specified.**
2. Replacement Parts supplied from the Sony Parts Center will sometimes have a different shape from the original parts. This is due to "improved parts and/or engineering changes" or "standardization of genuine parts."
   This manual's exploded views and electrical spare parts list indicate the part numbers of "the standardized genuine parts at the present".
   Regarding engineering part changes by the engineering department, refer to Sony service bulletins and service manual supplements.
3. The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes.
   The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.
4. Items with no part number and/or no description are not stocked because they are seldom required for routine service.

9-2. EXPLODED VIEW



24
B3x6
28
18
B3x6
28
15
B3x6
PWH3x6
16
28
21
1
PWH3x6
PWH3x6
20
2
For NTSC,P
18
B3x6
PWH3x6
PWH3x6
PWH3x6
PWH3x6
PWH3x6
PWH3x6
33
PWH3x6
PWH3x6
31
B3x6
23
3
PWH3x6
15
B3x6
28
PWH3x6
B3x6
7
PWH3x6
5
6
PWH3x6
4
22
B3x6
8
11
26
27
B3x6
32
10
P2.6x6
P2.6x6
14
PS4x6
B3x6
B3x6
32
29
12
19
17
13
B3x6
B3x6
B3x6
B3x6
B3x6
PS4x6
B3x6
25
30
9
For PM
B2.6x4
34
18
B3x6

No.	Parts No.	SP	Description
1	A-6257-178-A	o	MOUNTED CIRCUIT BOARD, PR-103 (For UC, J)
	A-6257-185-A	o	MOUNTED CIRCUIT BOARD, PR-103P (For P)
	A-6257-230-A	o	MOUNTED CIRCUIT BOARD, PR-103PM (For PM)
2	A-6257-179-A	o	MOUNTED CIRCUIT BOARD, PR-104 (For UC, J)
	A-6257-186-A	o	MOUNTED CIRCUIT BOARD, PR-104P (For P)
	A-6257-231-A	o	MOUNTED CIRCUIT BOARD, PR-104PM (For PM)
3	A-6261-039-A	o	MOUNTED CIRCUIT BOARD, AU-99 (For UC, J, PM)
	A-6261-041-A	o	MOUNTED CIRCUIT BOARD, AU-99P (For P)
4	X-2125-507-2	o	CASE BLOCK ASSY
5	X-2125-508-2	o	PANEL ASSY (For UC, J)
	X-2125-512-2	o	PANEL ASSY (For P)
	X-2125-520-1	o	PANEL ASSY (For PM)
6	X-3717-237-1	s	KNOB ASSY, VOL
7	X-3719-114-1	s	KNOB ASSY (2 POSI)
8	1-464-718-21	s	RF MODULATOR (RFU-856) (For P)
	1-464-841-21	s	RF MODULATOR (RFU-789) (For UC, PM)
	1-464-842-21	s	RF MODULATOR (RFU-788) (For J)
9	1-464-867-11	s	CONVERTER UNIT, DC-DC (CD-73K)
10	1-509-176-31	s	CONNECTOR (RECEPTACLE) 3P (For UC, P, PM)
	1-509-184-31	s	CONNECTOR (RECEPTACLE) 3P (For J)
⚠ 11	1-532-543-21	s	BREAKER, CIRCUIT
12	1-562-227-21	s	RECEPTACLE, BNC
13	1-563-971-11	s	CONNECTOR (R-F) 20P
14	1-564-603-11	s	CONNECTOR (WITH DC SW) 4P
15	2-125-531-01	s	SUSPENSION
16	2-125-532-01	o	STAY
17	2-125-533-01	o	BRACKET, JACK
18	2-125-537-01	o	BRACKET, L (For UC, J, P)
	2-125-598-01	o	BRACKET (For PM)
19	2-125-538-01	o	BRACKET, BNC
20	2-125-539-01	o	BRACKET (A)
21	2-125-540-01	o	BRACKET (B)
22	2-125-541-01	o	BRACKET (C)
23	2-125-542-01	o	BRACKET (D)
24	2-125-546-11	o	CASE
25	2-125-556-01	o	BRACKET, SW
26	2-125-557-01	o	PANEL, REAR (For UC, J, PM)
	2-125-557-11	o	PANEL, REAR (For P)
27	2-371-215-01	s	WASHER
28	3-613-164-03	o	SHAFT, STEP
29	3-654-545-01	s	SPACER, BNC
30	2-125-569-01	o	CUSHION, SW
31	3-719-133-01	o	CUSHION, METER
32	4-879-919-01	o	ANGLE, GUARD
33	8-719-907-03	s	DIODE BD703G
34	A-6268-310-A	o	MOUNTED CIRCUIT BOARD, DUS-287 (For PM)

9-3. ELECTRICAL PARTS LIST

ABBREVIATIONS

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
C□□, CT□□	CAPACITOR	IC□□	IC	Q□□	TRANSISTOR
CF□□	CERAMIC FILTER	J□□	JACK	R□□, RV□□	RESISTOR
CN□□	CONNECTOR	L□□	INDUCTOR	RY□□	RELAY
D□□	DIODE	M□□	MOTOR	S□□, SW□□	SWITCH
DL□□	DELAY LINE	ME□□	METER	SB□□	SOLAR BATTERY
F□□	FUSE	MIC□□	MICROPHONE	T□□	TRANSFORMER
FB□□	FERRITE BEAD	PG□□	PG COIL	TH□□	THERMISTOR
FL□□	FILTER	PL□□	LAMP	X□□	CRYSTAL
H□□	HEAD	PM□□	SOLENOIDE		

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

General Purpose Electrical Parts List

Parts that are not listed in the "reference numbers order list" are shown in following list.
Reference numbers are omitted.

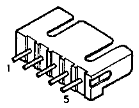
Part No.	SP	Description
CAPACITOR		
. CHIP CERAMIC		
1-163-083-00	s	CAP, CHIP CERAMIC 1pF ±0.25pF 50V
1-163-085-00	s	CAP, CHIP CERAMIC 2pF ±0.25pF 50V
1-163-087-00	s	CAP, CHIP CERAMIC 4pF ±0.25pF 50V
1-163-089-00	s	CAP, CHIP CERAMIC 6pF ±0.5pF 50V
1-163-091-00	s	CAP, CHIP CERAMIC 8pF ±0.5pF 50V
1-163-093-00	s	CAP, CHIP CERAMIC 10pF 5% 50V
1-163-097-00	s	CAP, CHIP CERAMIC 15pF 5% 50V
1-163-101-00	s	CAP, CHIP CERAMIC 22pF 5% 50V
1-163-105-00	s	CAP, CHIP CERAMIC 33pF 5% 50V
1-163-109-00	s	CAP, CHIP CERAMIC 47pF 5% 50V
1-163-113-00	s	CAP, CHIP CERAMIC 68pF 5% 50V
1-163-117-00	s	CAP, CHIP CERAMIC 100pF 5% 50V
1-163-121-00	s	CAP, CHIP CERAMIC 150pF 5% 50V
1-163-125-00	s	CAP, CHIP CERAMIC 220pF 5% 50V
1-163-129-00	s	CAP, CHIP CERAMIC 330pF 5% 50V
1-163-133-00	s	CAP, CHIP CERAMIC 470pF 5% 50V
1-163-137-00	s	CAP, CHIP CERAMIC 680pF 5% 50V
1-163-141-00	s	CAP, CHIP CERAMIC 1000pF 5% 50V
1-163-145-00	s	CAP, CHIP CERAMIC 1500pF 10% 50V
1-163-013-00	s	CAP, CHIP CERAMIC 2200pF 10% 50V
1-163-015-00	s	CAP, CHIP CERAMIC 3300pF 10% 50V
1-163-017-00	s	CAP, CHIP CERAMIC 4700pF 10% 50V
1-163-019-00	s	CAP, CHIP CERAMIC 6800pF 10% 50V
1-163-021-00	s	CAP, CHIP CERAMIC 0.01 10% 50V
1-163-023-00	s	CAP, CHIP CERAMIC 0.015 10% 50V
1-163-033-00	s	CAP, CHIP CERAMIC 0.022 10% 25V
1-163-034-00	s	CAP, CHIP CERAMIC 0.033 50V
1-163-035-00	s	CAP, CHIP CERAMIC 0.047 50V
1-163-036-00	s	CAP, CHIP CERAMIC 0.068 25V
1-163-038-00	s	CAP, CHIP CERAMIC 0.1 25V

Part No.	SP	Description
. ELECTROLYTIC		
1-124-902-00	s	CAP, ELECT 0.47 20% 50V
1-124-791-11	s	CAP, ELECT 1.0 20% 100V
1-124-925-11	s	CAP, ELECT 2.2 20% 100V
1-123-382-00	s	CAP, ELECT 3.3 20% 100V
1-124-927-00	s	CAP, ELECT 4.7 20% 100V
1-123-875-91	s	CAP, ELECT 10 20% 50V
1-124-908-11	s	CAP, ELECT 22 20% 50V
1-124-963-11	s	CAP, ELECT 33 20% 16V
1-124-482-11	s	CAP, ELECT 33 20% 35V
1-124-917-11	s	CAP, ELECT 33 20% 63V
1-124-446-11	s	CAP, ELECT 47 20% 10V
1-124-477-11	s	CAP, ELECT 47 20% 25V
1-124-910-11	s	CAP, ELECT 47 20% 50V
1-124-443-00	s	CAP, ELECT 100 20% 10V
1-126-101-11	s	CAP, ELECT 100 20% 16V
1-124-478-11	s	CAP, ELECT 100 20% 25V
1-124-122-11	s	CAP, ELECT 100 20% 50V
1-124-444-00	s	CAP, ELECT 220 20% 10V
1-124-120-11	s	CAP, ELECT 220 20% 25V
1-124-484-11	s	CAP, ELECT 220 20% 35V
1-124-911-11	s	CAP, ELECT 220 20% 50V
1-124-442-00	s	CAP, ELECT 330 20% 6.3V
1-124-604-00	s	CAP, ELECT 330 20% 10V
1-124-119-00	s	CAP, ELECT 330 20% 16V
1-124-479-11	s	CAP, ELECT 330 20% 25V
1-124-485-11	s	CAP, ELECT 330 20% 35V
1-124-912-11	s	CAP, ELECT 330 20% 50V
1-124-472-11	s	CAP, ELECT 470 20% 10V
1-124-475-11	s	CAP, ELECT 470 20% 16V
1-124-480-11	s	CAP, ELECT 470 20% 25V
1-126-104-11	s	CAP, ELECT 470 20% 35V
1-124-913-11	s	CAP, ELECT 470 20% 50V

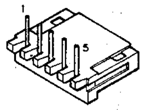
Part No.	SP	Description
CONNECTOR		
1-564-001-11	o	RECEPTACLE 2P MALE (STRAIGHT TYPE)
1-564-012-11	o	RECEPTACLE 2P MALE (ANGLE TYPE)
1-562-147-11	o	HOUSING 2P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-002-11	o	RECEPTACLE 3P MALE (STRAIGHT TYPE)
1-564-013-11	o	RECEPTACLE 3P MALE (ANGLE TYPE)
1-562-148-11	o	HOUSING 3P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-003-11	o	RECEPTACLE 4P MALE (STRAIGHT TYPE)
1-564-014-11	o	RECEPTACLE 4P MALE (ANGLE TYPE)
1-562-149-11	o	HOUSING 4P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-004-11	o	RECEPTACLE 5P MALE (STRAIGHT TYPE)
1-564-015-11	o	RECEPTACLE 5P MALE (ANGLE TYPE)
1-562-150-11	o	HOUSING 5P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-005-11	o	RECEPTACLE 6P MALE (STRAIGHT TYPE)
1-564-016-11	o	RECEPTACLE 6P MALE (ANGLE TYPE)
1-562-151-11	o	HOUSING 6P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-006-11	o	RECEPTACLE 7P MALE (STRAIGHT TYPE)
1-564-017-11	o	RECEPTACLE 7P MALE (ANGLE TYPE)
1-562-152-11	o	HOUSING 7P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-007-11	o	RECEPTACLE 8P MALE (STRAIGHT TYPE)
1-564-018-11	o	RECEPTACLE 8P MALE (ANGLE TYPE)
1-562-153-11	o	HOUSING 8P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-008-41	o	RECEPTACLE 9P MALE (STRAIGHT TYPE)
1-564-019-11	o	RECEPTACLE 9P MALE (ANGLE TYPE)
1-562-154-11	o	HOUSING 9P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-009-11	o	RECEPTACLE 10P MALE (STRAIGHT TYPE)
1-564-020-11	o	RECEPTACLE 10P MALE (ANGLE TYPE)
1-562-155-11	o	HOUSING 10P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-010-21	o	RECEPTACLE 11P MALE (STRAIGHT TYPE)
1-564-021-11	o	RECEPTACLE 11P MALE (ANGLE TYPE)
1-562-156-11	o	HOUSING 11P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-011-11	o	RECEPTACLE 12P MALE (STRAIGHT TYPE)
1-564-022-11	o	RECEPTACLE 12P MALE (ANGLE TYPE)
1-562-157-11	o	HOUSING 12P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-683-11	o	RECEPTACLE 13P MALE (STRAIGHT TYPE)
1-564-743-11	o	RECEPTACLE 13P MALE (ANGLE TYPE)
1-562-627-11	o	HOUSING 13P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-069-11	o	RECEPTACLE 14P MALE (STRAIGHT TYPE)
1-564-630-11	o	RECEPTACLE 14P MALE (ANGLE TYPE)
1-562-185-11	o	HOUSING 14P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32
1-564-855-11	o	RECEPTACLE 15P MALE (STRAIGHT TYPE)
1-564-877-11	o	RECEPTACLE 15P MALE (ANGLE TYPE)
1-562-958-11	o	HOUSING 15P
1-564-026-21	o	CONTACT AWG24-30
1-564-681-21	o	CONTACT AWG32

RECEPTACLE

top-type receptacle

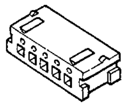


side-type receptacle



PLUG

housing



contact

Part No.	SP	Description
RESISTOR		
. CHIP		
1-216-295-00	s	RES, CHIP 0 5% 1/10W
1-216-298-00	s	RES, CHIP 2.2 5% 1/10W
1-216-302-00	s	RES, CHIP 2.7 5% 1/10W
1-216-304-00	s	RES, CHIP 3.3 5% 1/10W
1-216-306-00	s	RES, CHIP 3.9 5% 1/10W
1-216-308-00	s	RES, CHIP 4.7 5% 1/10W
1-216-309-00	s	RES, CHIP 5.6 5% 1/10W
1-216-311-00	s	RES, CHIP 6.8 5% 1/10W
1-216-313-00	s	RES, CHIP 8.2 5% 1/10W
1-216-001-00	s	RES, CHIP 10 5% 1/10W
1-216-003-00	s	RES, CHIP 12 5% 1/10W
1-216-005-00	s	RES, CHIP 15 5% 1/10W
1-216-007-00	s	RES, CHIP 18 5% 1/10W
1-216-009-00	s	RES, CHIP 22 5% 1/10W
1-216-011-00	s	RES, CHIP 27 5% 1/10W
1-216-013-00	s	RES, CHIP 33 5% 1/10W
1-216-015-00	s	RES, CHIP 39 5% 1/10W
1-216-017-00	s	RES, CHIP 47 5% 1/10W
1-216-019-00	s	RES, CHIP 56 5% 1/10W
1-216-021-00	s	RES, CHIP 68 5% 1/10W
1-216-023-00	s	RES, CHIP 82 5% 1/10W
1-216-025-00	s	RES, CHIP 100 5% 1/10W
1-216-027-00	s	RES, CHIP 120 5% 1/10W
1-216-029-00	s	RES, CHIP 150 5% 1/10W
1-216-031-00	s	RES, CHIP 180 5% 1/10W
1-216-033-00	s	RES, CHIP 220 5% 1/10W
1-216-035-00	s	RES, CHIP 270 5% 1/10W
1-216-037-00	s	RES, CHIP 330 5% 1/10W
1-216-039-00	s	RES, CHIP 390 5% 1/10W
1-216-041-00	s	RES, CHIP 470 5% 1/10W
1-216-043-00	s	RES, CHIP 560 5% 1/10W
1-216-045-00	s	RES, CHIP 680 5% 1/10W
1-216-047-00	s	RES, CHIP 820 5% 1/10W
1-216-049-00	s	RES, CHIP 1k 5% 1/10W
1-216-051-00	s	RES, CHIP 1.2k 5% 1/10W
1-216-053-00	s	RES, CHIP 1.5k 5% 1/10W
1-216-055-00	s	RES, CHIP 1.8k 5% 1/10W
1-216-057-00	s	RES, CHIP 2.2k 5% 1/10W
1-216-059-00	s	RES, CHIP 2.7k 5% 1/10W
1-216-061-00	s	RES, CHIP 3.3k 5% 1/10W
1-216-063-00	s	RES, CHIP 3.9k 5% 1/10W
1-216-065-00	s	RES, CHIP 4.7k 5% 1/10W
1-216-067-00	s	RES, CHIP 5.6k 5% 1/10W
1-216-069-00	s	RES, CHIP 6.8k 5% 1/10W
1-216-071-00	s	RES, CHIP 8.2k 5% 1/10W
1-216-073-00	s	RES, CHIP 10k 5% 1/10W
1-216-075-00	s	RES, CHIP 12k 5% 1/10W
1-216-077-00	s	RES, CHIP 15k 5% 1/10W
1-216-079-00	s	RES, CHIP 18k 5% 1/10W
1-216-081-00	s	RES, CHIP 22k 5% 1/10W
1-216-083-00	s	RES, CHIP 27k 5% 1/10W
1-216-085-00	s	RES, CHIP 33k 5% 1/10W
1-216-087-00	s	RES, CHIP 39k 5% 1/10W
1-216-089-00	s	RES, CHIP 47k 5% 1/10W
1-216-091-00	s	RES, CHIP 56k 5% 1/10W
1-216-093-00	s	RES, CHIP 68k 5% 1/10W
1-216-095-00	s	RES, CHIP 82k 5% 1/10W
1-216-097-00	s	RES, CHIP 100k 5% 1/10W
1-216-099-00	s	RES, CHIP 120k 5% 1/10W
1-216-101-00	s	RES, CHIP 150k 5% 1/10W
1-216-103-00	s	RES, CHIP 180k 5% 1/10W
1-216-105-00	s	RES, CHIP 220k 5% 1/10W
1-216-107-00	s	RES, CHIP 270k 5% 1/10W
1-216-109-00	s	RES, CHIP 330k 5% 1/10W
1-216-111-00	s	RES, CHIP 390k 5% 1/10W
1-216-113-00	s	RES, CHIP 470k 5% 1/10W
1-216-115-00	s	RES, CHIP 560k 5% 1/10W
1-216-117-00	s	RES, CHIP 680k 5% 1/10W
1-216-119-00	s	RES, CHIP 820k 5% 1/10W
1-216-121-00	s	RES, CHIP 1.0M 5% 1/10W
1-216-123-00	s	RES, CHIP 1.2M 5% 1/10W
1-216-125-00	s	RES, CHIP 1.5M 5% 1/10W
1-216-127-00	s	RES, CHIP 1.8M 5% 1/10W
1-216-129-00	s	RES, CHIP 2.2M 5% 1/10W
1-216-131-00	s	RES, CHIP 2.7M 5% 1/10W
1-216-133-00	s	RES, CHIP 3.3M 5% 1/10W

PARTS CHANGE INFORMATION

In this parts list, **) marked parts are design-changed. Applicable Serial No. are as follows.

1) marked parts for Serial No. up to 10410.
2) marked parts for Serial No. 10411 and higher.

Ref.No	Parts No.	SP	Description
AU-99P BOARD			
	A-6261-041-A	o	MOUNTED CIRCUIT BOARD, AU-99P
C100	1-124-257-00	s	ELECT 2.2 20% 50V
C101	1-124-120-11	s	ELECT 220 20% 16V
C102	1-130-479-00	s	MYLAR 0.0047 5% 50V
C103	1-136-173-00	s	FILM 0.47 5% 50V
C104	1-130-497-00	s	MYLAR 0.15 5% 50V
C105	1-130-485-00	s	MYLAR 0.015 5% 50V
C106	1-130-499-00	s	MYLAR 0.22 5% 50V
C107	1-130-493-00	s	MYLAR 0.068 5% 50V
C108	1-130-491-00	s	MYLAR 0.047 5% 50V
C109	1-130-481-00	s	MYLAR 0.0068 5% 50V
C110	1-130-483-00	s	MYLAR 0.01 5% 50V
C111	1-124-245-00	s	ELECT 4.7 20% 25V
C112	1-124-462-00	s	ELECT 10 20% 16V
C113	1-124-462-00	s	ELECT 10 20% 16V
C200	1-124-257-00	s	ELECT 2.2 20% 50V
C202	1-130-479-00	s	MYLAR 0.0047 5% 50V
C203	1-136-173-00	s	FILM 0.47 5% 50V
C204	1-130-497-00	s	MYLAR 0.15 5% 50V
C205	1-130-485-00	s	MYLAR 0.015 5% 50V
C206	1-130-499-00	s	MYLAR 0.22 5% 50V
C207	1-130-493-00	s	MYLAR 0.068 5% 50V
C208	1-130-491-00	s	MYLAR 0.047 5% 50V
C209	1-130-481-00	s	MYLAR 0.0068 5% 50V
C210	1-130-483-00	s	MYLAR 0.01 5% 50V
C211	1-124-245-00	s	ELECT 4.7 20% 25V
C212	1-124-462-00	s	ELECT 10 20% 16V
C213	1-124-236-00	s	ELECT 47 20% 16V
C300	1-123-661-00	s	ELECT 100 20% 6.3V
C301	1-123-661-00	s	ELECT 100 20% 6.3V
C310	1-124-257-00	s	ELECT 2.2 20% 50V
C312	1-124-638-11	s	ELECT 22 20% 6.3V
C313	1-124-224-00	s	ELECT 47 20% 6.3V
C314	1-124-638-11	s	ELECT 22 20% 6.3V
C317	1-123-661-00	s	ELECT 100 20% 6.3V
C318	1-162-714-11	s	CERAMIC 150PF 1% 50V
C320	1-131-341-00	s	TANTALUM 0.1 10% 35V
C325	1-131-375-00	s	TANTALUM 4.7 10% 10V
C328	1-124-258-00	s	ELECT 3.3 20% 50V
C330	1-162-638-11	s	CERAMIC CHIP 1 16V
C333	1-124-224-00	s	ELECT 47 20% 6.3V
C334	1-124-245-00	s	ELECT 4.7 20% 25V
C336	1-124-462-00	s	ELECT 10 20% 16V
C337	1-123-661-00	s	ELECT 100 20% 6.3V
C338	1-124-638-11	s	ELECT 22 20% 6.3V
C341	1-130-479-00	s	MYLAR 0.0047 5% 50V
C344	1-124-462-00	s	ELECT 10 20% 16V
C345	1-130-482-00	s	MYLAR 0.0082 5% 50V
C349	1-124-598-11	s	ELECT 22 20% 25V
C350	1-124-245-00	s	ELECT 4.7 20% 25V
C354	1-124-638-11	s	ELECT 22 20% 6.3V
C355	1-123-661-00	s	ELECT 100 20% 6.3V
C356	1-123-611-00	s	ELECT 1 20% 50V
C361	1-130-491-00	s	MYLAR 0.047 5% 50V
C364	1-124-638-11	s	ELECT 22 20% 6.3V
C365	1-124-462-00	s	ELECT 10 20% 16V
C368	1-123-661-00	s	ELECT 100 20% 6.3V
C376	1-124-462-00	s	ELECT 10 20% 16V
C377	1-163-012-00	s	CERAMIC CHIP 0.0018 10% 50V
C381	1-124-255-00	s	ELECT 1 20% 50V
C401	1-123-661-00	s	ELECT 100 20% 6.3V
C402	1-131-377-00	s	TANTALUM 10 10% 6.3V
C403	1-131-343-00	s	TANTALUM 0.22 10% 35V
C404	1-131-377-00	s	TANTALUM 10 10% 6.3V
C405	1-131-343-00	s	TANTALUM 0.22 10% 35V
C407	1-124-236-00	s	ELECT 47 20% 16V
C417	1-123-661-00	s	ELECT 100 20% 6.3V
C420	1-131-341-00	s	TANTALUM 0.1 10% 35V
C425	1-131-375-00	s	TANTALUM 4.7 10% 10V
C428	1-124-258-00	s	ELECT 3.3 20% 50V
C430	1-162-638-11	s	CERAMIC CHIP 1 16V
C433	1-124-224-00	s	ELECT 47 20% 6.3V
C434	1-124-245-00	s	ELECT 4.7 20% 25V
C436	1-124-462-00	s	ELECT 10 20% 16V
C437	1-123-661-00	s	ELECT 100 20% 6.3V
C438	1-124-638-00	s	ELECT 22 20% 6.3V
C439	1-130-490-11	s	MYLAR 0.039 5% 50V
C441	1-130-479-00	s	MYLAR 0.0047 5% 50V
C444	1-124-462-00	s	ELECT 10 20% 16V
C445	1-130-482-00	s	MYLAR 0.0082 5% 50V
C449	1-124-598-11	s	ELECT 22 20% 25V
C450	1-124-245-00	s	ELECT 4.7 20% 25V
C454	1-124-638-11	s	ELECT 22 20% 6.3V
C456	1-124-236-00	s	ELECT 47 20% 16V
C503	1-123-661-00	s	ELECT 100 20% 6.3V
C505	1-123-661-00	s	ELECT 100 20% 6.3V
C509	1-123-612-00	s	ELECT 2.2 20% 50V
C510	1-124-144-00	s	ELECT 220 20% 16V
C511	1-124-236-00	s	ELECT 47 20% 16V
C514	1-124-245-00	s	ELECT 4.7 20% 25V
C515	1-124-245-00	s	ELECT 4.7 20% 25V
C517	1-124-462-00	s	ELECT 10 20% 16V
C518	1-124-462-00	s	ELECT 10 20% 16V
C519	1-124-236-00	s	ELECT 47 20% 16V
C520	1-124-144-00	s	ELECT 220 20% 16V
C522	1-124-144-00	s	ELECT 220 20% 16V
C524	1-124-144-00	s	ELECT 220 20% 16V
C525	1-124-144-00	s	ELECT 220 20% 16V
C526	1-124-144-00	s	ELECT 220 20% 16V
C528	1-124-144-00	s	ELECT 220 20% 16V
C529	1-124-144-00	s	ELECT 220 20% 16V
C531	1-124-224-00	s	ELECT 47 20% 6.3V
C534	1-124-144-00	s	ELECT 220 20% 16V
C535	1-162-638-11	s	CERAMIC CHIP 1 16V
C539	1-123-661-00	s	ELECT 100 20% 6.3V
C541	1-123-661-00	s	ELECT 100 20% 6.3V
C560	1-124-245-00	s	ELECT 4.7 20% 25V
C564	1-124-245-00	s	ELECT 4.7 20% 25V
C566	1-124-236-00	s	ELECT 47 20% 16V
C571	1-130-472-00	s	MYLAR 0.0012 5% 50V
C579	1-124-598-11	s	ELECT 22 20% 25V
C585	1-124-245-00	s	ELECT 4.7 20% 25V
C586	1-124-236-00	s	ELECT 47 20% 16V
C589	1-123-611-00	s	ELECT 1 20% 50V
C590	1-123-611-00	s	ELECT 1 20% 50V
C596	1-131-347-00	s	TANTALUM 1 10% 35V
C597	1-131-347-00	s	TANTALUM 1 10% 35V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
D100	8-719-101-23	s	1SS123
D300	8-719-101-23	s	1SS123
D301	8-719-101-23	s	1SS123
D302	8-719-101-23	s	1SS123
D303	8-719-101-23	s	1SS123
D400	8-719-101-23	s	1SS123
D500	8-719-200-02	s	10E2
D501	8-719-200-02	s	10E2
D502	8-719-105-82	s	RD5.1M-B2
D503	8-719-106-71	s	RD12M-B2
D504	8-719-101-23	s	1SS123
D505	8-719-106-16	s	RD6.8M-B1
D506	8-719-106-89	s	RD15M-B2
D507	8-719-106-08	s	RD6.2M-B2
D508	8-719-101-23	s	1SS123
D510	8-719-101-23	s	1SS123
D511	8-719-200-02	s	10E2
D512	8-719-200-02	s	10E2
D513	8-719-100-05	s	1S2837
D514	8-719-100-05	s	1S2837
D516	8-719-101-23	s	1SS123
D517	8-719-101-23	s	1SS123
D518	8-719-100-03	s	1S2835
D519	8-719-100-05	s	1S2837
D560	8-719-101-23	s	1SS123
D561	8-719-101-23	s	1SS123
FL100	1-421-865-11	s	SKEWING
FL101	1-236-003-11	s	LOW PASS 25kHz
FL200	1-421-865-11	s	SKEWING
FL300	1-236-011-11	s	LOW PASS 1MHz
FL301	1-236-012-11	s	BAND PASS 310kHz
FL302	1-236-013-11	s	BAND PASS 540kHz
FL303	1-236-014-11	s	BAND PASS
FL304	1-236-003-11	s	LOW PASS 25kHz
IC100	8-759-908-16	s	TL072CPS (TI)
IC102	8-752-031-27	s	CXA1097Q (SONY)
IC103	8-759-908-17	s	TL082CPS (TI)
IC300	8-759-403-78	s	AN3920K (MATSUSHITA)
IC301	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC302	8-752-009-90	s	CX20099 (SONY)
IC303	8-759-908-16	s	TL072CPS (TI)
IC305	8-759-908-17	s	TL082CPS (TI)
IC306	8-752-011-10	s	CX20111 (SONY)
IC307	8-759-708-05	s	NJM78L05A (JRC)
IC401	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC500	8-759-908-17	s	TL082CPS (TI)
IC501	8-759-700-07	s	NJM2903M (JRC)
IC502	8-759-200-67	s	TC4001BF (SONY)
IC503	8-759-908-17	s	TL082CPS (TI)
IC504	8-759-908-17	s	TL082CPS (TI)
IC505	8-759-745-64	s	NJM4560M (JRC)
IC506	8-749-901-29	s	BX1481 (SONY)
IC507	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC508	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC509	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC510	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC511	8-759-204-95	s	TC74HC02F (TOSHIBA)
IC512	8-759-100-93	s	UPC393G2 (NEC)
IC513	8-759-205-78	s	TC504013BF (TOSHIBA)

Ref.No	Parts No.	SP	Description
J500	1-507-863-31	s	LARGE TYPE "HEADPHONES"
L300	1-410-713-21	s	CHIP 47
L301	1-410-713-21	s	CHIP 47
L302	1-410-713-21	s	CHIP 47
L303	1-410-064-11	s	MICRO 2.7MMH
L304	1-410-064-11	s	MICRO 2.7MMH
L305	1-408-417-00	s	MICRO 47
L402	1-410-713-21	s	CHIP 47
L403	1-410-713-21	s	CHIP 47
L404	1-410-713-21	s	CHIP 47
L405	1-410-713-21	s	CHIP 47
L500	1-410-713-21	s	CHIP 47
L501	1-410-713-21	s	CHIP 47
L502	1-410-713-21	s	CHIP 47
L503	1-410-713-21	s	CHIP 47
L504	1-421-329-00	s	CHOKE
L505	1-421-329-00	s	CHOKE
L506	1-421-329-00	s	CHOKE
L507	1-421-329-00	s	CHOKE
Q100	8-729-202-38	s	2SC3326N
Q101	8-729-202-38	s	2SC3326N
Q200	8-729-202-38	s	2SC3326N
Q201	8-729-202-38	s	2SC3326N
Q300	8-729-102-66	s	2SC1623
Q301	8-729-100-76	s	2SA812
Q302	8-729-202-38	s	2SC3326N
Q303	8-729-102-66	s	2SC1623
Q304	8-729-102-66	s	2SC1623
Q305	8-729-202-38	s	2SC3326N
Q306	8-729-102-66	s	2SC1623
Q307	8-729-102-66	s	2SC1623
Q308	8-729-903-00	s	DTC114TK
Q309	8-729-202-38	s	2SC3326N
Q310	8-729-102-66	s	2SC1623
Q311	8-729-100-76	s	2SA812
Q313	8-729-102-66	s	2SC1623
Q402	8-729-202-38	s	2SC3326N
Q403	8-729-102-66	s	2SC1623
Q404	8-729-102-66	s	2SC1623
Q405	8-729-202-38	s	2SC3326N
Q406	8-729-202-38	s	2SC3326N
Q500	8-729-901-02	s	DTC124XK
Q502	8-729-901-46	s	DTA114YK
Q503	8-729-100-76	s	2SA812
Q504	8-729-102-66	s	2SC1623
Q505	8-729-100-76	s	2SA812
Q506	8-729-982-22	s	2SB822
Q507	8-729-901-04	s	DTC114EK
Q508	8-729-901-05	s	DTC124EK
Q509	8-729-905-52	s	2SD1055
Q510	8-729-102-66	s	2SC1623
Q511	8-729-102-66	s	2SC1623
Q512	8-729-900-52	s	DTC114YK
Q513	8-729-102-66	s	2SC1623
Q516	8-729-102-66	s	2SC1623
Q560	8-729-202-38	s	2SC3326N
Q561	8-729-102-66	s	2SC1623
Q562	8-729-903-30	s	DTC144TK
Q563	8-729-102-66	s	2SC1623

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
Q564	8-729-901-02	s	DTC124XK
Q565	8-729-903-29	s	DTA144TK
Q566	8-729-900-51	s	DTC114TK
Q567	8-729-901-46	s	DTA114YK
Q568	8-729-903-29	s	DTA144TK
Q569	8-729-102-66	s	2SC1623
Q570	8-729-202-38	s	2SC3326N
Q573	8-729-202-38	s	2SC3326N
Q574	8-729-901-01	s	DTC144EK
Q575	8-729-901-46	s	DTA114YK
Q576	8-729-900-52	s	DTC114YK
Q577	8-729-901-46	s	DTA114YK
Q578	8-729-900-52	s	DTC114YK
Q579	8-729-901-01	s	DTC144EK
Q580	8-729-900-51	s	DTA114TK
Q581	8-729-102-66	s	2SC1623
Q582	8-729-900-52	s	DTC114YK
Q583	8-729-100-76	s	2SA812
Q584	8-729-102-66	s	2SC1623
Q585	8-729-102-76	s	2SA812
R103	1-216-699-11	s	METAL CHIP 100k 0.5% 1/10W
R104	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R105	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R106	1-216-642-11	s	METAL CHIP 430 0.5% 1/10W
R204	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R205	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R206	1-216-642-11	s	METAL CHIP 430 0.5% 1/10W
R302	1-216-641-11	s	METAL CHIP 390 0.5% 1/10W
R303	1-216-641-11	s	METAL CHIP 390 0.5% 1/10W
R310	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R311	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R312	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R315	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R324	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R325	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R326	1-216-647-11	s	METAL CHIP 680 0.5% 1/10W
R327	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R328	1-216-677-11	s	METAL CHIP 12k 0.5% 1/10W
R329	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R330	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R331	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R343	1-215-470-00	s	METAL 110k 1% 1/6W
R348	1-216-620-11	s	METAL CHIP 51 0.5% 1/10W
R368	1-216-657-11	s	METAL CHIP 1.8K 0.5% 1/10W
R369	1-216-660-11	s	METAL CHIP 2.4K 0.5% 1/10W
R410	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R411	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R412	1-216-670-11	s	METAL CHIP 6.2k 0.5% 1/10W
R415	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R424	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R425	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R426	1-216-647-11	s	METAL CHIP 680 0.5% 1/10W
R427	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R428	1-216-677-11	s	METAL CHIP 12k 0.5% 1/10W
R429	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R430	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R431	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R432	1-216-669-11	s	METAL CHIP 5.6k 0.5% 1/10W
R443	1-216-699-11	s	METAL CHIP 100k 0.5% 1/10W
R543	1-216-608-11	s	METAL CHIP 16 0.5% 1/10W
R548	1-216-608-11	s	METAL CHIP 16 0.5% 1/10W
R550	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R551	1-215-861-00	s	METAL OXIDE 47 5% 1W
R557	1-215-861-00	s	METAL OXIDE 47 5% 1W
R573	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R574	1-216-691-11	s	METAL CHIP 47k 0.5% 1/10W
R575	1-216-678-11	s	METAL CHIP 13k 0.5% 1/10W
RV100	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-1"
RV200	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-2"
RV301	1-230-526-11	s	VAR, METAL GLAZE 47k
RV302	1-230-528-11	s	VAR, METAL GLAZE 220k
RV303	1-230-841-11	s	VAR, METAL FILM 2k
RV304	1-230-526-11	s	VAR, METAL GLAZE 47k
RV305	1-230-526-11	s	VAR, METAL GLAZE 47k
RV306	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-3"
RV307	1-230-527-11	s	VAR, METAL GLAZE 100k
RV308	1-230-523-11	s	VAR, METAL GLAZE 10k
RV403	1-230-841-11	s	VAR, METAL FILM 2k
RV404	1-230-526-11	s	VAR, METAL GLAZE 47k
RV405	1-230-526-11	s	VAR, METAL GLAZE 47k
RV406	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-4"
RV500	1-230-526-11	s	VAR, METAL GLAZE 47k
RV501	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV502	1-230-524-11	s	VAR, METAL GLAZE 22k
RV503	1-237-862-11	s	VAR, CARBON 10k "HEADPHONES"
RV504	1-230-846-11	s	VAR, METAL FILM 100k
RV505	1-230-846-11	s	VAR, METAL FILM 100k
S500	1-570-845-11	s	SLIDE

CN-214 BOARD

	1-623-990-11	o	PRINTED CIRCUIT BOARD, CN-214

CN-228 BOARD

	1-623-801-11	o	PRINTED CIRCUIT BOARD, CN-228
	1-464-718-21	s	MODULATOR, RF (RFU-856)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

DL-18 BOARD

All of the component parts on the DL-18 board are supplied together when you order PR-104P board.

Ref.No	Parts No.	SP	Description
	1-623-994-11	o	PRINTED CIRCUIT BOARD, DL-18
C2	1-124-234-00	s	ELECT 22 20% 10V
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
IC1	8-752-320-38	s	CXL5002M (SONY)
Q1	8-729-216-22	s	2SA1162
Q2	8-729-216-22	s	2SA1162
RV1	1-228-475-00	s	VAR, CERMET 20k

DL-18A BOARD

All of the component parts on the DL-18A board are supplied together when you order PR-104P board.

Ref.No	Parts No.	SP	Description
	1-623-994-11	o	PRINTED CIRCUIT BOARD, DL-18A
C2	1-124-234-00	s	ELECT 22 20% 10V
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
FB2	1-543-309-12	s	BEAD, FERRITE
IC1	8-752-320-37	s	CXL5001M (SONY)
Q1	8-729-216-22	s	2SA1162
RV1	1-228-475-00	s	VAR, CERMET 20k

DL-19 BOARD

All of the component parts on the DL-19 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-995-12	o	PRINTED CIRCUIT BOARD, DL-19
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
FB2	1-543-309-12	s	BEAD, FERRITE
FL1	1-235-759-11	s	LOW PASS 5MHz
IC1	8-752-320-37	s	CXL5001M (SONY)
Q1	8-729-201-26	s	2SC2715
Q2	8-729-216-22	s	2SA1162
Q3	8-729-216-22	s	2SA1162
RV610	1-228-475-00	s	VAR, CERMET 20k

DM-64 BOARD

All of the component parts on the DM-64 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-996-11	o	PRINTED CIRCUIT BOARD, DM-64
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
IC1	8-759-012-00	s	MC10H116M (MOTOROLA)
IC2	8-759-011-96	s	MC10H107M (MOTOROLA)
L1	1-410-694-31	s	CHIP 1.2
R9	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R10	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
RV608	1-228-470-00	s	VAR, CERMET 500

DUS-194 BOARD

All of the component parts on the DUS-194 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-599-12	o	PRINTED CIRCUIT BOARD, DUS-194
Q124	8-729-202-38	s	2SC3326N
R195	1-216-651-11	s	METAL CHIP 1K 0.5% 1/10W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

EQ-21 BOARD

All of the component parts on the EQ-21 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-997-12	o	PRINTED CIRCUIT BOARD, EQ-21
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
DL1	1-415-546-11	s	DELAY LINE 50ns
Q1	8-729-200-87	s	2SC2714
Q2	8-729-122-63	s	2SA1226
Q3	8-729-201-26	s	2SC2715
Q4	8-729-202-38	s	2SC3326N
Q5	8-729-202-38	s	2SC3326N
Q6	8-729-200-87	s	2SC2714
Q7	8-729-200-87	s	2SC2714
Q8	8-729-200-87	s	2SC2714
R5	1-216-635-00	s	METAL CHIP 220 0.5% 1/10W
RV605	1-228-471-00	s	VAR, CERMET 1k
RV606	1-228-471-00	s	VAR, CERMET 1k
RV607	1-228-474-00	s	VAR, CERMET 10k

EQ-21A BOARD

All of the component parts on the EQ-21A board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-997-12	o	PRINTED CIRCUIT BOARD, EQ-21A
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
DL1	1-415-546-11	s	DELAY LINE 50ns
Q1	8-729-200-87	s	2SC2714
Q2	8-729-122-63	s	2SA1226
Q3	8-729-201-26	s	2SC2715
Q4	8-729-202-38	s	2SC3326N
Q5	8-729-202-38	s	2SC3326N
Q6	8-729-200-87	s	2SC2714
Q7	8-729-200-87	s	2SC2714
Q8	8-729-200-87	s	2SC2714
R5	1-216-635-00	s	METAL CHIP 220 0.5% 1/10W
RV605	1-228-471-00	s	VAR, CERMET 1k
RV606	1-228-471-00	s	VAR, CERMET 1k
RV607	1-228-474-00	s	VAR, CERMET 10k

FL-67 BOARD

All of the component parts on the FL-67 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-626-387-11	o	PRINTED CIRCUIT BOARD, FL-67
1)C15	1-107-208-00	s	SILVERED, MICA 18PF 5% 500V
2)C15	1-163-099-00	s	CERAMIC 18PF 5% 50V
C16	1-161-051-00	s	CERAMIC 0.01 10% 25V
L1	1-410-703-21	s	CHIP 6.8
L2	1-410-698-51	s	CHIP 2.7
L3	1-410-699-51	s	CHIP 3.3
L4	1-410-704-21	s	CHIP 8.2
L5	1-410-708-31	s	CHIP 18
L6	1-410-709-21	s	CHIP 22
1)L7	1-408-408-00	s	MICRO 8.2
2)L7	1-410-704-21	s	CHIP 8.2
Q1	8-729-201-26	s	2SC2715
Q2	8-729-200-87	s	2SC2714
Q3	8-729-200-87	s	2SC2714
Q4	8-729-122-63	s	2SA1226
Q5	8-729-200-87	s	2SC2714
Q6	8-729-271-23	s	2SC2712
Q7	8-729-901-01	s	DTC144EK
Q8	8-729-271-23	s	2SC2712
R4	1-216-653-11	s	METAL CHIP 1.2k 0.5% 1/10W
R5	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R7	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R12	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R13	1-216-649-11	s	METAL CHIP 820 0.5% 1/10W
R15	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R16	1-216-642-11	s	METAL CHIP 430 0.5% 1/10W
1)R22	1-215-404-00	s	METAL FILM 200 1% 1/6W
2)R22	1-216-634-11	s	METAL CHIP 200 0.5% 1/10W
1)R23	1-215-385-00	s	METAL FILM 33 1% 1/6W
2)R23	1-216-615-11	s	METAL CHIP 33 0.5% 1/10W
1)R24	1-215-385-00	s	METAL FILM 33 1% 1/6W
2)R24	1-216-615-11	s	METAL CHIP 33 0.5% 1/10W
1)R25	1-215-389-00	s	METAL FILM 47 1% 1/6W
2)R25	1-216-619-11	s	METAL CHIP 47 0.5% 1/10W
RV1	1-228-471-00	s	VAR, CERMET 1k
RV2	1-228-472-00	s	VAR, CERMET 2k

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

FM-13 BOARD

All of the component parts on the FM-13 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-624-001-11	o	PRINTED CIRCUIT BOARD, FM-13
C174	1-124-224-00	s	ELECT 47 20% 6.3V
C275	1-123-647-00	s	ELECT 47 20% 6.3V
L121	1-410-713-21	s	INDUCTOR CHIP 47
L221	1-410-713-21	s	INDUCTOR CHIP 47
IC112	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC206	8-759-208-09	s	TC4052BFHB (TOSHIBA)

MT-42 BOARD

Ref.No	Parts No.	SP	Description
	1-623-805-12	o	PRINTED CIRCUIT BOARD, MT-42
D100	8-719-945-13	s	SLH-34YC3F
D101	8-719-945-13	s	SLH-34YC3F
ME100	1-520-495-21	s	LEVEL "LEVEL METER"
R100	1-249-408-11	s	CARBON 180 5% 1/4W
R101	1-249-408-11	s	CARBON 180 5% 1/4W
RV100	1-230-520-11	s	VAR, METAL GLAZE 1k

NR-27/-27A BOARD

All of the component parts on the NR-27/-27A board are supplied together when you order PR-104P board.

Ref.No	Parts No.	SP	Description
	1-624-212-12	o	PRINTED CIRCUIT BOARD, NR-27A/-27A
C6	1-135-098-21	s	TANTALUM CHIP 47 20% 6.3V
C7	1-135-098-21	s	TANTALUM CHIP 47 20% 6.3V
IC1	8-752-030-80	s	CXA1039M (SONY)
L1	1-410-694-31	s	CHIP 1.2 (For NR-27 only)
Q1	8-729-201-26	s	2SC2715
Q2	8-729-201-26	s	2SC2715
Q3	8-729-201-26	s	2SC2715
Q4	8-729-201-26	s	2SC2715
Q5	8-729-201-26	s	2SC2715
Q6	8-729-201-26	s	2SC2715
Q7	8-729-200-87	s	2SC2714
Q8	8-729-122-63	s	2SA1226
Q9	8-729-200-87	s	2SC2714
Q10	8-729-122-63	s	2SA1226
Q11	8-729-201-26	s	2SC2715
Q12	8-729-201-26	s	2SC2715
Q13	8-729-201-26	s	2SC2715
Q14	8-729-201-26	s	2SC2715
R5	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R6	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R16	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R23	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R26	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R32	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
RV1	1-228-472-00	s	VAR, CERMET 2k
RV2	1-228-472-00	s	VAR, CERMET 2k
RV3	1-228-476-00	s	VAR, CERMET 50k
RV4	1-228-473-00	s	VAR, CERMET 5k
RV5	1-228-472-00	s	VAR, CERMET 2k
RV6	1-228-473-00	s	VAR, CERMET 5k
RV7	1-228-473-00	s	VAR, CERMET 5k
TH1	1-800-200-00	s	S-3K

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

PA-72 BOARD

All of the component parts on the PA-72 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-998-22	o	PRINTED CIRCUIT BOARD, PA-72
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
IC1	8-759-112-53	s	UPC1663G (NEC)
IC2	8-759-112-53	s	UPC1663G (NEC)
RV601	1-228-474-00	s	VAR, CERMET 10k
RV602	1-228-474-00	s	VAR, CERMET 10k

PA-72A BOARD

All of the component parts on the PA-72A board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-998-22	o	PRINTED CIRCUIT BOARD, PA-72A
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
IC1	8-759-112-53	s	UPC1663G (NEC)
IC2	8-759-112-53	s	UPC1663G (NEC)
RV601	1-228-472-00	s	VAR, CERMET 2k
RV602	1-228-474-00	s	VAR, CERMET 10k

PR-103P BOARD

This board includes the DM-64, DL-19, DUS-194, EQ-21, EQ-21A, FL-67, FM-13, PA-72, PA-72A, TG-37 and VA-69 boards.

Ref.No	Parts No.	SP	Description
	A-6257-185-A	o	MOUNTED CIRCUIT BOARD, PR-103P
C100	1-124-224-00	s	ELECT 47 20% 6.3V
C102	1-124-224-00	s	ELECT 47 20% 6.3V
C104	1-123-611-00	s	ELECT 1 20% 50V
C106	1-123-611-00	s	ELECT 1 20% 50V
C108	1-123-611-00	s	ELECT 1 20% 50V
C112	1-123-611-00	s	ELECT 1 20% 50V
C113	1-107-339-11	s	SILVERED, MICA 630.8PF
C114	1-124-584-00	s	ELECT 100 20% 10V
C115	1-161-051-00	s	CERAMIC 0.01 10% 25V
C119	1-124-224-00	s	ELECT 47 20% 6.3%
C121	1-124-224-00	s	ELECT 47 20% 6.3%
C127	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C129	1-123-611-00	s	ELECT 1 20% 50V
C130	1-123-611-00	s	ELECT 1 20% 50V
C157	1-107-075-00	s	MICA 39PF 5% 50V
C163	1-109-539-00	s	MICA 150PF 5% 50V
C164	1-107-157-00	s	MICA 27PF 5% 500V
C200	1-124-224-00	s	ELECT 47 20% 6.3V
C202	1-124-224-00	s	ELECT 47 20% 6.3V
C205	1-123-611-00	s	ELECT 1 20% 50V
C207	1-123-611-00	s	ELECT 1 20% 50V
C208	1-123-611-00	s	ELECT 1 20% 50V
C211	1-123-611-00	s	ELECT 1 20% 50V
C212	1-107-041-00	s	MICA 1.8PF 0.5PF 500V
C213	1-107-204-00	s	MICA 12PF 5% 500V
C214	1-107-204-00	s	MICA 12PF 5% 500V
C216	1-123-611-00	s	ELECT 1 20% 50V
C217	1-123-611-00	s	ELECT 1 20% 50V
C218	1-107-340-11	s	SILVERED, MICA 651.2PF
C223	1-124-224-00	s	ELECT 47 20% 6.3V
C225	1-124-224-00	s	ELECT 47 20% 6.3V
C230	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C233	1-123-611-00	s	ELECT 1 20% 50V
C234	1-123-611-00	s	ELECT 1 20% 50V
C241	1-162-882-11	s	CERAMIC 180PF 5% 50V
C242	1-162-888-11	s	CERAMIC 560PF 5% 50V
C266	1-109-539-00	s	MICA 150PF 5% 50V
C267	1-107-157-00	s	MICA 27PF 5% 500V
C285	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C288	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C309	1-124-638-11	s	ELECT 22 20% 6.3V
C310	1-124-462-00	s	ELECT 10 20% 16V
C316	1-124-462-00	s	ELECT 10 20% 16V
C319	1-124-638-11	s	ELECT 22 20% 6.3V
C320	1-124-462-00	s	ELECT 10 20% 16V
C321	1-124-462-00	s	ELECT 10 20% 16V
C602	1-124-462-00	s	ELECT 100 10% 16V
C605	1-124-465-00	s	ELECT 0.47 20% 50V
C608	1-124-638-11	s	ELECT 22 20% 10V
C612	1-124-462-00	s	ELECT 10 20% 16V
C615	1-124-462-00	s	ELECT 10 20% 16V
C617	1-124-638-11	s	ELECT 22 20% 6.3V
C640	1-124-224-00	s	ELECT 47 20% 6.3V
C651	1-123-611-00	s	ELECT 1 20% 50V
C810	1-624-462-00	s	ELECT 10 20% 16V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
C812	1-624-462-00	s	ELECT 10 20% 16V
C817	1-124-584-00	s	ELECT 100 20% 10V
C900	1-124-224-00	s	ELECT 47 20% 6.3V
C902	1-124-224-00	s	ELECT 47 20% 6.3V
C908	1-124-224-00	s	ELECT 47 20% 6.3V
C912	1-124-224-00	s	ELECT 47 20% 6.3V
D201	8-719-101-23	s	1SS123
D600	8-719-100-03	s	1S2835
D601	8-719-101-23	s	1SS123
D602	8-719-106-16	s	RD6.8M-B1
D604	8-719-101-23	s	1SS123
D605	8-719-101-23	s	1SS123
D606	8-719-100-05	s	1S2837
D800	8-719-101-23	s	1SS123
D801	8-713-300-57	s	1T33
D900	8-719-106-16	s	RD6.8M-B1
FL100	1-236-092-12	s	LOW PASS 5.5MHz
FL200	1-235-284-00	s	LOW PASS (C)
FL300	1-235-757-11	s	LOW PASS
IC100	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC101	1-464-602-31	s	CIRCUIT UNIT, HF
IC104	8-759-200-79	s	TC4049BF (TOSHIBA)
IC105	8-759-207-74	s	TC4030BFHB (TOSHIBA)
IC107	8-720-002-92	s	TX-429M (SONY)
IC108	8-759-969-13	s	SN16913P (TI)
IC109	8-759-908-17	s	TL082CPS (TI)
IC110	8-759-700-95	s	NJM1496M (JRC)
IC111	8-759-105-49	s	UPC319G2 (NEC)
IC200	8-759-100-97	s	UPC339G2 (NEC)
IC201	8-759-941-17	s	SN74LS06NS (TI)
IC202	8-752-015-81	s	CX20158 (SONY)
IC203	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC204	1-464-602-11	s	CIRCUIT UNIT, HF
IC208	8-720-002-92	s	TX-429M (SONY)
IC209	8-759-969-13	s	SN16913P (TI)
IC210	8-759-908-17	s	TL082CPS (TI)
IC211	8-759-700-95	s	NJM1496M (JRC)
IC212	8-759-105-49	s	UPC319G2 (NEC)
IC214	8-759-100-93	s	UPC393G2 (NEC)
IC215	8-759-925-82	s	SN74HC21NS (TI)
IC216	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC217	8-759-115-55	s	UPC1555C (NEC)
IC218	8-759-115-55	s	UPC1555C (NEC)
IC303	8-752-320-37	s	CXL5001M (SONY)
IC304	8-752-320-37	s	CXL5001M (SONY)
IC305	8-752-320-37	s	CXL5001M (SONY)
IC306	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC600	8-759-201-47	s	TA7357AP (TOSHIBA)
IC601	8-759-907-81	s	SN74LS221NS (TI)
IC602	8-759-908-92	s	TL084CNS (TI)
IC603	8-759-100-93	s	UPC393G2 (NEC)
IC604	8-759-205-01	s	TC74HC20F (TOSHIBA)
IC605	1-464-605-11	s	CIRCUIT UNIT, ED
IC606	8-759-200-90	s	TC4538BF (TOSHIBA)
IC607	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC608	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC609	8-759-907-81	s	SN74LS221NS (TI)
IC610	8-757-993-00	s	CX-7993A (SONY)
IC611	8-759-207-74	s	TC4030BFHB (TOSHIBA)
IC612	8-759-920-14	s	S-8053ALR (SEIKO I and E)
IC613	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC614	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC615	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC800	8-759-907-81	s	SN74LS221NS (TI)
IC801	8-749-901-21	s	BX1461 (SONY)
IC802	8-759-908-17	s	TL082CPS (TI)
IC803	8-759-205-78	s	TC504013BF (TOSHIBA)
L100	1-410-713-21	s	CHIP 47
L101	1-410-713-21	s	CHIP 47
L102	1-410-713-21	s	CHIP 47
L103	1-410-713-21	s	CHIP 47
L104	1-408-417-21	s	MICRO 47
L105	1-410-713-21	s	CHIP 47
L109	1-410-713-21	s	CHIP 47
L110	1-410-713-21	s	CHIP 47
L111	1-410-713-21	s	CHIP 47
L113	1-410-713-21	s	CHIP 47
L114	1-410-713-21	s	CHIP 47
L115	1-410-713-21	s	CHIP 47
L116	1-410-701-31	s	CHIP 4.7
L117	1-410-718-31	s	CHIP 120
L118	1-410-718-31	s	CHIP 120
L119	1-410-713-21	s	CHIP 47
L120	1-410-713-21	s	CHIP 47
L200	1-410-713-21	s	CHIP 47
L201	1-410-713-21	s	CHIP 47
L202	1-410-713-21	s	CHIP 47
L203	1-410-713-21	s	CHIP 47
L204	1-410-713-21	s	CHIP 47
L206	1-410-713-21	s	CHIP 47
L207	1-410-708-31	s	CHIP 18
L209	1-410-713-21	s	CHIP 47
L210	1-410-713-21	s	CHIP 47
L211	1-410-713-21	s	CHIP 47
L212	1-410-713-21	s	CHIP 47
L213	1-410-713-21	s	CHIP 47
L214	1-410-725-21	s	CHIP 470
L215	1-410-725-21	s	CHIP 470
L216	1-410-704-21	s	CHIP 8.2
L217	1-410-718-31	s	CHIP 120
L218	1-410-718-31	s	CHIP 120
L219	1-410-713-21	s	CHIP 47
L220	1-410-713-21	s	CHIP 47
L300	1-410-706-31	s	CHIP 12
L301	1-410-713-21	s	CHIP 47
L302	1-410-713-21	s	CHIP 47
L303	1-410-713-21	s	CHIP 47
L304	1-410-713-21	s	CHIP 47
L305	1-410-713-21	s	CHIP 47
L306	1-410-713-21	s	CHIP 47
L307	1-410-713-21	s	CHIP 47
L308	1-410-713-21	s	CHIP 47

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
L309	1-410-713-21	s	CHIP 47
L310	1-410-713-21	s	CHIP 47
L600	1-410-713-21	s	CHIP 47
L601	1-410-713-21	s	CHIP 47
L602	1-410-713-21	s	CHIP 47
L603	1-410-713-21	s	CHIP 47
L604	1-410-713-21	s	CHIP 47
L605	1-410-713-21	s	CHIP 47
L606	1-410-713-21	s	CHIP 47
L800	1-410-713-21	s	CHIP 47
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
LV800	1-407-929-00	s	VAR 4.7
Q100	8-729-201-26	s	2SC2715
Q103	8-729-202-38	s	2SC3326N
Q104	8-729-201-26	s	2SC2715
Q105	8-729-122-63	s	2SA1226
Q106	8-729-122-63	s	2SA1226
Q107	8-729-122-63	s	2SA1226
Q108	8-729-201-26	s	2SC2715
Q109	8-729-201-26	s	2SC2715
Q110	8-729-201-26	s	2SC2715
Q112	8-729-122-63	s	2SA1226
Q113	8-729-201-26	s	2SC2715
Q114	8-729-201-26	s	2SC2715
Q115	8-729-122-63	s	2SA1226
Q116	8-729-122-63	s	2SA1226
Q117	8-729-271-23	s	2SC2712
Q118	8-729-271-23	s	2SC2712
Q119	8-729-122-63	s	2SA1226
Q120	8-729-271-23	s	2SC2712
Q121	8-729-271-23	s	2SC2712
Q122	8-729-271-23	s	2SC2712
Q203	8-729-201-26	s	2SC2715
Q205	8-729-122-63	s	2SA1226
Q206	8-729-122-63	s	2SA1226
Q207	8-729-122-63	s	2SA1226
Q208	8-729-201-26	s	2SC2715
Q209	8-729-201-26	s	2SC2715
Q210	8-729-201-26	s	2SC2715
Q211	8-729-201-26	s	2SC2715
Q212	8-729-122-63	s	2SA1226
Q213	8-729-201-26	s	2SC2715
Q214	8-729-201-26	s	2SC2715
Q216	8-729-122-63	s	2SA1226
Q217	8-729-122-63	s	2SA1226
Q218	8-729-271-23	s	2SC2712
Q219	8-729-271-23	s	2SC2712
Q220	8-729-122-63	s	2SA1226
Q221	8-729-271-23	s	2SC2712
Q222	8-729-271-23	s	2SC2712
Q223	8-729-271-23	s	2SC2712

Ref.No	Parts No.	SP	Description
Q300	8-729-271-23	s	2SC2712
Q301	8-729-271-23	s	2SC2712
Q302	8-729-271-23	s	2SC2712
Q303	8-729-109-44	s	2SK94
Q304	8-729-102-66	s	2SC1623
Q306	8-729-100-76	s	2SA812
Q307	8-729-100-76	s	2SA812
Q308	8-729-100-76	s	2SA812
Q309	8-729-100-76	s	2SA812
Q310	8-729-122-63	s	2SA1226
Q600	8-729-109-44	s	2SK94
Q601	8-729-122-63	s	2SA1226
Q602	8-729-901-01	s	DTC144EK
Q603	8-729-201-26	s	2SC2715
Q605	8-729-901-01	s	DTC144EK
Q606	8-729-901-01	s	DTC144EK
Q607	8-729-901-01	s	DTC144EK
Q800	8-729-102-66	s	2SC1623
Q801	8-729-102-66	s	2SC1623
Q900	8-729-982-22	s	2SB822
Q901	8-729-201-26	s	2SC2715
Q902	8-729-905-52	s	2SD1055
Q903	8-729-201-26	s	2SC2715
Q904	8-729-905-52	s	2SD1055
R106	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R115	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R116	1-216-648-11	s	METAL CHIP 750 0.5% 1/10W
R119	1-216-631-11	s	METAL CHIP 150 0.5% 1/10W
R120	1-218-178-11	s	METAL CHIP 1k 0.1% 1/16W
R121	1-218-176-11	s	METAL CHIP 289 0.1% 1/16W
R126	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R128	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R131	1-216-683-11	s	METAL CHIP 22k 0.5% 1/10W
R135	1-216-626-11	s	METAL CHIP 91 0.5% 1/10W
R136	1-216-649-11	s	METAL CHIP 820 0.5% 1/10W
R137	1-216-671-11	s	METAL CHIP 6.8k 1% 1/10W
R146	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R147	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R156	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R157	1-216-687-11	s	METAL CHIP 33k 0.5% 1/10W
R162	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R163	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R164	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R165	1-216-649-11	s	METAL CHIP 820 0.5% 1/10W
R172	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R173	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R174	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R175	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R176	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R177	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R187	1-216-683-11	s	METAL CHIP 22k 0.5% 1/10W
R188	1-216-669-11	s	METAL CHIP 5.6k 0.5% 1/10W
R191	1-216-648-11	s	METAL CHIP 750 0.5% 1/10W
R192	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R233	1-216-631-11	s	METAL CHIP 150 0.5% 1/10W
R234	1-218-177-11	s	METAL CHIP 1k 0.1% 1/6W
R235	1-218-175-11	s	METAL CHIP 267 0.1% 1/16W
R240	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R242	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
R261	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R262	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R271	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R272	1-216-687-11	s	METAL CHIP 33k 0.5% 1/10W
R277	1-216-645-11	s	METAL CHIP 560 0.5% 1/10W
R278	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R279	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R280	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R287	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R288	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R289	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R290	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R291	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R292	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R302	1-216-683-11	s	METAL CHIP 22k 0.5% 1/10W
R303	1-216-669-11	s	METAL CHIP 5.6k 0.5% 1/10W
R626	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R802	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
RV102	1-230-523-11	s	VAR, METAL GLAZE 10k
RV103	1-230-526-11	s	VAR, METAL GLAZE 47k
RV104	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV106	1-230-523-11	s	VAR, METAL GLAZE 10k
RV108	1-230-523-11	s	VAR, METAL GLAZE 10k
RV200	1-230-520-11	s	VAR, METAL GLAZE 1k
RV201	1-230-523-11	s	VAR, METAL GLAZE 10k
RV202	1-230-526-11	s	VAR, METAL GLAZE 47k
RV203	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV204	1-230-523-11	s	VAR, METAL GLAZE 10k
RV206	1-230-523-11	s	VAR, METAL GLAZE 10k
RV300	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV308	1-230-524-11	s	VAR, METAL GLAZE 22k
RV309	1-230-524-11	s	VAR, METAL GLAZE 22k
RV310	1-230-524-11	s	VAR, METAL GLAZE 22k
RV600	1-230-524-11	s	VAR, METAL GLAZE 22k
RV601	1-230-524-11	s	VAR, METAL GLAZE 22k
RV800	1-230-523-11	s	VAR, METAL GLAZE 10k
TH100	1-800-200-00	s	S-3K
X600	1-567-863-11	s	CRYSTAL 10.664135 MHz

Ref.No Parts No. SP Description

PR-104P BOARD

This board includes the DL-18, DL-18A, and NR-27A boards.

Ref.No	Parts No.	SP	Description
	A-6257-186-A	o	MOUNTED CIRCUIT BOARD, PR-104P
C112	1-124-638-11	s	ELECT 22 20% 6.3V
C113	1-124-638-11	s	ELECT 22 20% 6.3V
C115	1-124-638-11	s	ELECT 22 20% 6.3V
C116	1-124-638-11	s	ELECT 22 20% 6.3V
C135	1-124-462-00	s	ELECT 10 20% 16V
C138	1-124-638-11	s	ELECT 22 20% 6.3V
C140	1-124-638-11	s	ELECT 22 20% 6.3V
C143	1-124-462-00	s	ELECT 10 20% 16V
C144	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C153	1-124-462-00	s	ELECT 10 20% 16V
C200	1-123-638-11	s	ELECT 22 20% 6.3V
C208	1-135-099-00	s	TANTALUM CHIP 2.2 20% 6.3V
C209	1-135-099-00	s	TANTALUM CHIP 2.2 20% 6.3V
C212	1-124-638-11	s	ELECT 22 20% 10V
C215	1-124-638-11	s	ELECT 22 20% 6.3V
C221	1-135-099-00	s	TANTALUM CHIP 2.2 20% 6.3V
C222	1-135-099-00	s	TANTALUM CHIP 2.2 20% 6.3V
C317	1-124-443-00	s	ELECT 100 20% 6.3V
C322	1-123-611-00	s	ELECT 1 20% 50V
C323	1-124-224-00	s	ELECT 47 20% 6.3V
C332	1-124-224-00	s	ELECT 47 20% 6.3V
C339	1-124-638-11	s	ELECT 22 20% 6.3V
C400	1-124-462-00	s	ELECT 10 20% 16V
C401	1-123-611-00	s	ELECT 1 20% 50V
C402	1-124-224-00	s	ELECT 47 20% 6.3V
C403	1-124-224-00	s	ELECT 47 20% 6.3V
C406	1-123-611-00	s	ELECT 1 20% 50V
C407	1-124-224-00	s	ELECT 47 20% 6.3V
C409	1-124-224-00	s	ELECT 47 20% 6.3V
C411	1-124-224-00	s	ELECT 47 20% 6.3V
C412	1-124-224-00	s	ELECT 47 20% 6.3V
C424	1-162-878-11	s	CERAMIC 91PF 5% 50V
C429	1-124-224-00	s	ELECT 47 20% 6.3V
C430	1-124-224-00	s	ELECT 47 20% 6.3V
C432	1-124-224-00	s	ELECT 47 20% 6.3V
C440	1-124-224-00	s	ELECT 47 20% 6.3V
C446	1-124-224-00	s	ELECT 47 20% 6.3V
C447	1-124-224-00	s	ELECT 47 20% 6.3V
C501	1-124-638-11	s	ELECT 22 20% 6.3V
C517	1-124-638-11	s	ELECT 22 20% 10V
C519	1-124-638-11	s	ELECT 22 20% 6.3V
C524	1-124-638-11	s	ELECT 22 20% 6.3V
C533	1-124-638-11	s	ELECT 22 20% 10V
C535	1-124-638-11	s	ELECT 22 20% 6.3V
C605	1-124-224-00	s	ELECT 47 20% 6.3V
C609	1-124-224-00	s	ELECT 47 20% 6.3V
C614	1-162-890-11	s	CERAMIC 820PF 5% 50V
C617	1-162-890-11	s	CERAMIC 820PF 5% 50V
C904	1-124-224-00	s	ELECT 47 20% 6.3V
C906	1-124-224-00	s	ELECT 47 20% 6.3V
C910	1-124-224-00	s	ELECT 47 20% 6.3V
C912	1-124-224-00	s	ELECT 47 20% 6.3V

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Ref.No	Parts No.	SP	Description
CV400	1-141-260-00	s	TRIMAR, CERAMIC
D100	8-719-105-52	s	RD3.6M-B2
D101	8-719-101-23	s	1SS123
D102	8-719-101-23	s	1SS123
D103	8-719-101-23	s	1SS123
D200	8-719-101-23	s	1SS123
D201	8-719-101-23	s	1SS123
D400	8-719-101-23	s	1SS123
D900	8-719-106-16	s	RD6.8M-B1
DL300	1-415-339-00	s	DELAY LINE 300ns
FL100	1-235-322-11	s	LOW PASS (LPF-B)
FL300	1-236-057-11	s	LOW PASS
FL400	1-235-181-00	s	BAND PASS
FL600	1-235-321-11	s	LOW PASS (LPF-A)
FL601	1-235-321-11	s	LOW PASS (LPF-A)
IC100	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC102	8-759-201-47	s	TA7357AP (TOSHIBA)
IC103	8-759-105-49	s	UPC319G2 (NEC)
IC104	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC105	8-759-908-17	s	TL082CPS (TI)
IC106	8-759-907-81	s	SN74LS221NS (TI)
IC200	8-759-907-81	s	SN74LS221NS (TI)
IC201	8-759-902-88	s	SN74LS123NS (TI)
IC202	8-749-901-21	s	BX1461 (SONY)
IC203	8-759-908-92	s	TL084CNS (TI)
IC204	8-759-931-43	s	SN74LS624NS (TI)
IC301	8-752-015-81	s	CX20158 (SONY)
IC302	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC304	8-752-015-81	s	CX20158 (SONY)
IC400	8-759-908-17	s	TL082CPS (TI)
IC401	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC402	8-759-908-92	s	TL084CNS (TI)
IC403	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC404	8-759-906-59	s	CX22017 (SONY)
IC406	1-464-601-11	s	CIRCUIT UNIT, VA
IC500	8-759-907-81	s	SN74LS221NS (TI)
IC501	8-759-907-81	s	SN74LS221NS (TI)
IC502	8-759-907-81	s	SN74LS221NS (TI)
IC503	8-759-907-81	s	SN74LS221NS (TI)
IC504	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC505	8-749-901-21	s	BX1461 (SONY)
IC506	8-759-908-17	s	TL082CPS (TI)
IC507	1-464-608-21	s	CIRCUIT UNIT, VCO
IC508	8-759-922-29	s	CX23084 (SONY)
IC509	8-759-907-81	s	SN74LS221NS (TI)
IC510	8-759-907-81	s	SN74LS221NS (TI)
IC511	8-749-901-21	s	BX1461 (SONY)
IC512	1-464-608-21	s	CIRCUIT UNIT, VCO
IC513	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC600	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC601	1-808-038-11	s	BS-6336
IC900	8-759-708-02	s	NJM78L02A (JRC)
IC901	8-759-700-64	s	NJM79L03A (JRC)

Ref.No	Parts No.	SP	Description
L100	1-410-713-21	s	CHIP 47
L101	1-410-713-21	s	CHIP 47
L102	1-410-706-31	s	CHIP 12
L103	1-410-714-31	s	CHIP 56
L106	1-410-713-21	s	CHIP 47
L107	1-410-713-21	s	CHIP 47
L108	1-410-713-21	s	CHIP 47
L109	1-410-718-31	s	CHIP 120
L110	1-410-721-21	s	CHIP 220
L200	1-410-713-21	s	CHIP 47
L201	1-410-713-21	s	CHIP 47
L202	1-410-713-21	s	CHIP 47
L203	1-410-713-21	s	CHIP 47
L301	1-410-713-21	s	CHIP 47
L302	1-410-713-21	s	CHIP 47
L303	1-410-713-21	s	CHIP 47
L304	1-410-713-21	s	CHIP 47
L305	1-410-713-21	s	CHIP 47
L306	1-410-713-21	s	CHIP 47
L307	1-410-713-21	s	CHIP 47
L400	1-410-713-21	s	CHIP 47
L401	1-410-713-21	s	CHIP 47
L402	1-410-713-21	s	CHIP 47
L403	1-410-713-21	s	CHIP 47
L404	1-410-713-21	s	CHIP 47
L405	1-410-713-21	s	CHIP 47
L406	1-410-713-21	s	CHIP 47
L407	1-410-713-21	s	CHIP 47
L408	1-410-713-21	s	CHIP 47
L409	1-410-713-21	s	CHIP 47
L410	1-410-713-21	s	CHIP 47
L411	1-410-713-21	s	CHIP 47
L412	1-410-713-21	s	CHIP 47
L500	1-410-713-21	s	CHIP 47
L501	1-410-713-21	s	CHIP 47
L502	1-410-713-21	s	CHIP 47
L503	1-410-713-21	s	CHIP 47
L504	1-410-713-21	s	CHIP 47
L505	1-410-713-21	s	CHIP 47
L600	1-410-713-21	s	CHIP 47
L601	1-410-713-21	s	CHIP 47
L602	1-410-713-21	s	CHIP 47
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
LV400	1-407-926-00	s	VAR 22

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
Q100	8-729-271-23	s	2SC2712
Q101	8-729-271-23	s	2SC2712
Q102	8-729-216-22	s	2SA1162
Q103	8-729-271-23	s	2SC2712
Q104	8-729-271-23	s	2SC2712
Q105	8-729-271-23	s	2SC2712
Q119	8-729-271-23	s	2SC2712
Q120	8-729-216-22	s	2SA1162
Q121	8-729-216-22	s	2SA1162
Q122	8-729-200-87	s	2SC2714
Q200	8-729-271-23	s	2SC2712
Q201	8-729-216-22	s	2SA1162
Q202	8-729-271-23	s	2SC2712
Q203	8-729-216-22	s	2SA1162
Q313	8-729-100-66	s	2SC1623
Q314	8-729-100-66	s	2SC1623
Q315	8-729-100-66	s	2SC1623
Q316	8-729-100-66	s	2SC1623
Q317	8-729-100-66	s	2SC1623
Q318	8-729-100-66	s	2SC1623
Q319	8-729-100-66	s	2SC1623
Q320	8-729-100-66	s	2SC1623
Q321	8-729-109-44	s	2SK94
Q322	8-729-200-87	s	2SC2714
Q323	8-729-216-22	s	2SA1162
Q324	8-729-201-26	s	2SC2715
Q400	8-729-100-76	s	2SA812
Q401	8-729-109-44	s	2SK94
Q402	8-729-100-66	s	2SC1623
Q403	8-729-100-76	s	2SA812
Q404	8-729-109-44	s	2SK94
Q405	8-729-100-66	s	2SC1623
Q406	8-729-100-76	s	2SA812
Q407	8-729-100-66	s	2SC1623
Q408	8-729-201-26	s	2SC2715
Q409	8-729-201-26	s	2SC2715
Q410	8-729-201-26	s	2SC2715
Q411	8-729-100-66	s	2SC1623
Q412	8-729-100-66	s	2SC1623
Q413	8-729-100-66	s	2SC1623
Q414	8-729-100-66	s	2SC1623
Q415	8-729-100-66	s	2SC1623
Q416	8-729-100-66	s	2SC1623
Q417	8-729-100-66	s	2SC1623
Q600	8-729-216-22	s	2SA1162
Q601	8-729-109-44	s	2SK94
Q602	8-729-271-23	s	2SC2712
Q603	8-729-216-22	s	2SA1162
Q604	8-729-109-44	s	2SK94
Q605	8-729-271-23	s	2SC2712
Q606	8-729-216-22	s	2SA1162
Q900	8-729-982-22	s	2SB822
Q901	8-729-201-26	s	2SC2715
Q902	8-729-905-52	s	2SD1055
Q903	8-729-201-26	s	2SC2715
Q904	8-729-905-52	s	2SD1055

Ref.No	Parts No.	SP	Description
R111	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R112	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R168	1-215-443-00	s	METAL FILM 8.2k 1% 1/6W
R173	1-215-433-00	s	METAL FILM 3.3k 1% 1/6W
R200	1-216-674-11	s	METAL CHIP 9.1k 0.5% 1/10W
R203	1-216-672-11	s	METAL CHIP 7.5k 0.5% 1/10W
R206	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R326	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R340	1-216-640-11	s	METAL CHIP 360 0.5% 1/10W
R358	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R424	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R457	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R458	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R459	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R504	1-216-668-11	s	METAL CHIP 5.1k 0.5% 1/10W
R508	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R518	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R610	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R612	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R620	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R622	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
RV100	1-230-520-11	s	VAR, METAL GLAZE 1k
RV108	1-230-523-11	s	VAR, METAL GLAZE 10k
RV200	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV201	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV202	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV307	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV308	1-230-519-11	s	VAR, METAL GLAZE 470
RV309	1-230-520-11	s	VAR, METAL GLAZE 1k
RV400	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV401	1-230-523-11	s	VAR, METAL GLAZE 10k
RV402	1-230-523-11	s	VAR, METAL GLAZE 10k
RV403	1-230-523-11	s	VAR, METAL GLAZE 10k
RV404	1-230-523-11	s	VAR, METAL GLAZE 10k
RV405	1-230-526-11	s	VAR, METAL GLAZE 47
RV406	1-230-520-11	s	VAR, METAL GLAZE 1k
RV407	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV408	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV409	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV410	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV411	1-230-520-11	s	VAR, METAL GLAZE 1k
RV500	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV501	1-230-523-11	s	VAR, METAL GLAZE 10k
RV502	1-230-523-11	s	VAR, METAL GLAZE 10k
RV600	1-230-520-11	s	VAR, METAL GLAZE 1k
RV601	1-230-520-11	s	VAR, METAL GLAZE 1k
RV602	1-230-520-11	s	VAR, METAL GLAZE 1k
RV605	1-230-520-11	s	VAR, METAL GLAZE 1k
TH100	1-800-200-00	s	S-3K
TH600	1-800-200-00	s	S-3K
TH601	1-800-200-00	s	S-3K
X400	1-567-860-11	s	CRYSTAL 4.433618 MHz
X500	1-567-863-11	s	CRYSTAL 10.664135 MHz

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

SW-234 BOARD

Ref.No	Parts No.	SP	Description
	1-623-802-11	o	PRINTED CIRCUIT BOARD, SW-234
R101	1-249-433-11	s	CARBON 22k 5% 1/4W
R102	1-249-433-11	s	CARBON 22k 5% 1/4W
R103	1-249-433-11	s	CARBON 22k 5% 1/4W
R104	1-249-433-11	s	CARBON 22k 5% 1/4W
S101	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-1 ON/OFF"
S102	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-2 ON/OFF"
S103	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-3 ON/OFF"
S104	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-4 ON/OFF"

SW-235 BOARD

Ref.No	Parts No.	SP	Description
	1-623-806-11	o	PRINTED CIRCUIT BOARD, SW-235
R103	1-249-429-11	s	CARBON 10k 5% 1/4W
S100	1-570-845-11	s	SLIDE "LIGHT"
S105	1-552-539-00	s	KEY BOARD "BATT CHECK"

SW-243 BOARD

Ref.No	Parts No.	SP	Description
	1-623-804-11	o	PRINTED CIRCUIT BOARD, SW-243
	1-562-260-21	o	CONTACT, SOCKET
S900	1-553-629-00	s	TOGGLE "POWER"

SW-244 BOARD

Ref.No	Parts No.	SP	Description
	1-623-803-11	o	PRINTED CIRCUIT BOARD, SW-244
S106	1-570-845-11	s	SLIDE "DOLBY NR ON/OFF"

SW-255 BOARD

Ref.No	Parts No.	SP	Description
	1-623-989-11	o	PRINTED CIRCUIT BOARD, SW-255
S901	1-554-481-00	s	SLIDE "75 ohm ON/OFF"

TG-37 BOARD

All of the component parts on the TG-37 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-624-002-11	s	PRINTED CIRCUIT BOARD, TG-37
IC106	8-759-200-90	s	TC4538BF (TOSHIBA)
IC202	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC207	8-759-205-78	s	TC504013BF (TOSHIBA)
IC213	8-759-205-78	s	TC504013BF (TOSHIBA)
IC301	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC302	8-759-207-25	s	TC74HC163F (TOSHIBA)
RV105	1-228-476-00	s	VAR, CERMET 50k
RV602	1-228-476-00	s	VAR, CERMET 50k

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

A-69, DC-DC CONVERTER

VA-69 BOARD

All of the component parts on the VA-69 board are supplied together when you order PR-103P board.

Ref.No	Parts No.	SP	Description
	1-623-999-11	s	PRINTED CIRCUIT BOARD, VA-69
C3	1-135-093-21	s	TANTALUM CHIP 10 10% 16V
C4	1-135-093-21	s	TANTALUM CHIP 10 10% 16V
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
D1	8-719-101-23	s	1SS123
IC1	8-759-923-63	s	TL592PS (TI)
IC2	8-752-015-81	s	CX20158 (SONY)
Q1	8-729-201-26	s	2SC2715
Q2	8-729-201-26	s	2SC2715
Q3	8-729-201-26	s	2SC2715
Q4	8-729-201-26	s	2SC2715
RV609	1-228-472-00	s	VAR, CERMET 2k

DC-DC CONVERTER

Ref No.	Parts No.	SP	Description
	1-464-867-11	s	CONVERTER UNIT, DC-DC (CD-73K)
	A-4930-060-A	o	CD-73K S BOARD ASSY
	1-623-107-11	o	PRINTED CIRCUIT BOARD, PK-73M
	2-434-448-01	s	SCREW 2.6 x5
	2-431-741-01	s	SHEET, INSULATING
C1	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C2	1-124-946-11	s	ELECT 100 20% 25V
C3	1-124-946-11	s	ELECT 100 20% 25V
C4	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C5	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C6	1-106-343-00	s	FILM 0.001 10% 100V
C7	1-106-343-00	s	FILM 0.001 10% 100V
C8	1-136-153-00	s	FILM 0.01 10% 50V
C9	1-136-153-00	s	FILM 0.01 10% 50V
C10	1-124-946-11	s	ELECT 100 20% 25V
C11	1-124-946-11	s	ELECT 100 20% 25V
C12	1-124-946-11	s	ELECT 100 20% 25V
C13	1-124-946-11	s	ELECT 100 20% 25V
C14	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C15	1-124-946-11	s	ELECT 100 20% 25V
C16	1-124-515-11	s	ELECT (SOLID) 47 20% 10V
C17	1-127-515-11	s	ELECT (SOLID) 47 20% 10V
C18	1-127-515-11	s	ELECT (SOLID) 47 20% 10V
C19	1-124-946-11	s	ELECT 100 20% 25V
CN1	1-564-706-31	o	PIN HEADER, STRAIGHT 4P
CN2	1-564-210-00	o	PIN HEADER, STRAIGHT 12P
D1	8-719-907-25	s	ERA84-009
D2	8-719-907-25	s	ERA84-009
D3	8-719-907-25	s	ERA84-009
D4	8-719-907-25	s	ERA84-009
D5	8-719-907-25	s	ERA84-009
D6	8-719-907-25	s	ERA84-009
D7	8-719-981-00	s	ERC81-004
D8	8-719-981-00	s	ERC81-004
D9	8-719-981-00	s	ERC81-004
D10	8-719-981-00	s	ERC81-004
D11	8-719-940-69	s	1SS131
D12	8-719-940-69	s	1SS131
D13	8-719-110-41	s	RD15E-B2
D14	8-719-110-22	s	RD11E-B2
D15	8-719-109-93	s	RD6.2E-B2
D16	8-719-109-93	s	RD6.2E-B2
D18	8-719-110-17	s	RD10E-B2
L1	1-421-547-00	s	CHOKE 10
L2	A-4929-671-A	o	CD-73 L ASSY, 910
L3	1-421-547-00	s	CHOKE 10
L4	A-4929-671-A	o	CD-73 L ASSY, 910
L5	1-421-547-00	s	CHOKE 10
L6	A-4929-671-A	o	CD-73 L ASSY, 910
L7	1-421-547-00	s	CHOKE 10
L8	1-459-215-00	s	(WITH CORE) 120
L9	1-421-547-00	s	CHOKE 10
L10	1-421-381-11	s	FERRITE CHOKE
L11	1-421-547-00	s	CHOKE 10
Q1	8-729-177-43	s	2SD774
Q2	8-729-177-43	s	2SD774
Q3	1-807-915-11	s	2SC3692-L
Q4	1-807-915-11	s	2SC3692-L
R1	1-217-611-31	s	METAL PLATE 0.1 10% 2W
R2	1-244-851-11	s	CARBON 120 5% 1/2W
R3	1-244-851-11	s	CARBON 120 5% 1/2W
R4	1-247-696-11	s	CARBON 47 5% 1/4W
R5	1-247-696-11	s	CARBON 47 5% 1/4W
R6	1-244-851-11	s	CARBON 120 5% 1/2W
R7	1-249-431-11	s	CARBON 15k 5% 1/4W
R8	1-249-431-11	s	CARBON 15k 5% 1/4W
T1	1-447-717-11	s	CONVERTER

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref No.	Parts No.	SP	Description
FRAME			
	1-464-867-11	s	CONVERTER UNIT, DC-DC (CD-73K)
⚠ CB900	1-532-543-21	s	BREAKER CIRCUIT "BREAKER"
CN100	1-562-227-21	s	RECEPTACLE, BNC "ADV SYNC IN"
CN101	1-562-227-21	s	RECEPTACLE, BNC "SC IN"
CN102	1-562-227-21	s	RECEPTACLE, BNC "VIDEO 1 OUT"
CN103	1-562-227-21	s	RECEPTACLE, BNC "VIDEO 2 OUT"
CN900	1-563-971-11	s	CONNECTOR(R-F) 20P "FROM VTR"
CN901	1-564-603-11	s	CONNECTOR (WITH DC SWITCH), 4P "DC IN 12V"
CN902	1-509-176-31	s	RECEPTACLE 3P "AUDIO OUT"

9-4. PACKING MATERIAL AND ACCESSORY (SUPPLIED)

Parts No.	SP	Description
1-559-480-11	s	CABLE ASSY
1-566-771-11	s	CONNECTOR (R-F) 20P
2-125-558-01	o	SPACER
2-125-560-03	o	CUSHION (RIGHT)
2-125-561-02	o	CUSHION (LEFT)
2-125-565-02	o	INDIVIDUAL CARTON
3-698-917-01	o	BELT, SHOULDER